US Army Corps
of Engineers
HUNTSVILLE ENGINEERING
AND SUPPORT CENTER

Draft

Defense Environmental Restoration Program
for
Formerly Used Defense Sites
Ordnance and Explosives
Chemical Warfare Materials

ARCHIVES SEARCH REPORT

CONCLUSIONS AND RECOMMENDATIONS

Camp Adair / Adair Air Force Station

Corvallis, Oregon
Project Number F10OR002903

September 2001

Prepared by
US Army Corps of Engineers
ST. LOUIS DISTRICT

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ARCHIVE SEARCH REPORT – CONCLUSIONS AND RECOMMENDATION

TABLE OF CONTENTS

APPENDICES

FIGURES AND PLATES

1. INTRODUCTION

1.1 AUTHORITY

In 1986, Congress established the Defense Environmental Restoration Program (DERP) at 10 United State Code (USC) 2701 et seq. This program directed the Secretary of Defense to "carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary."

In March 1990, the Environmental Protection Agency (EPA) issued a revised National Contingency Plan (NCP). Under 40 Code of Federal Regulations (CFR) 300.120, EPA designated the Department of Defense (DOD) to be the removal response authority for incidents involving DOD military weapons and munitions under the jurisdiction, custody and control of DOD.

Since the beginning of this program, the U.S. Army Corps of Engineers acts as the agency responsible for environmental restoration at Formerly Used Defense Sites (FUDS). Beginning in 1990, the U.S. Army Engineering and Support Center, Huntsville (USAESCH) serves as the Center of Expertise (CX) and Design Center for Ordnance and Explosives. In cooperation with the USAESCH, the U.S. Army Corps of Engineers, St. Louis District, prepares Archives Search Reports (ASR) in support of environmental restoration at active DOD installations, Formerly Used Defense Sites (FUDS) and installation transitions under Base Realignment and Closure (BRAC) recommendations.

1.2 SUBJECT

Camp Adair / Adair Air Force Station consisted of 56,815.17 acres near the city of Corvallis in Polk, Benton, and Linn Counties, Oregon. Commencing in 1941 and extending through March 1944, the US Army acquired land and built Camp Adair as a new triangular division training camp. During April 1946, Camp Adair was declared surplus and assigned for disposition. After several years of inactivity the cantonment portion of Camp Adair was used as an Air Force Station between 1958 and 1969. In 1970, the Adair Air Force Station lands were determined excess and reported to the GSA for disposal.

For the purpose of this report, unless specifically addressing Adair Air Force Station, the site Camp Adair / Adair Air Force Station will be referred to as **Camp Adair**.

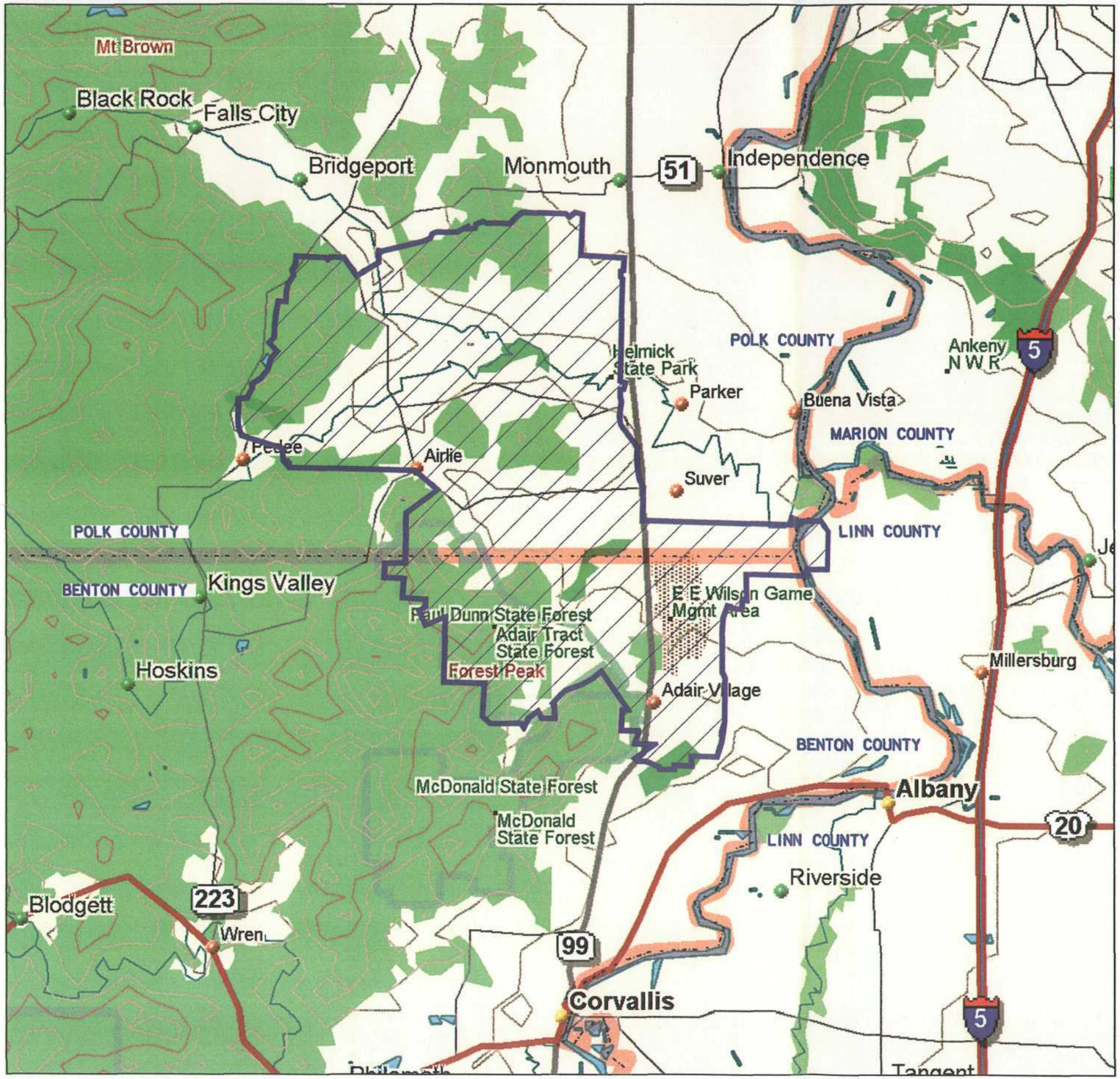
The former Camp Adair / Adair Air Force Station and the surrounding vicinity are shown in Figure 1-1.

1.3 PURPOSE

The ASR compiles information obtained through historical research at various archives and records holding facilities, interviews with persons associated with Camp Adair, and an inspection of the site. The search directs efforts towards determining possible use or disposal of Ordnance and Explosives (OE) and Chemical Warfare Material (CWM) on the former military establishment. The research places particular emphasis on establishing the types, quantities, and areas of use and disposal. This process obtains information for use in developing recommendations for further action at the former Camp Adair / Adair Air Force Station.

1.4 SCOPE

This investigation focuses on the potential OE and/or CWM contamination remaining on the former Camp Adair / Adair Air Force Station. In determining the OE and/or CWM potential, all 56,815.17 acres of Camp Adair was considered. The DERP-FUDS project number is F10OR002903.



LEGEND

SITE LOCATION

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
VICINITY MAP

PROJ. DATE: SEPT 2001	DATE OF MAP: 2000	FIGURE 1-1
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2. CONCLUSIONS

2.1 SUMMARY OF CONCLUSIONS

2.1.1 Conventional Ordnance

The archive search discovered a significant amount of evidence confirming that the US Army used Camp Adair to train infantry divisions during World War II. Four triangular infantry divisions were trained at Camp Adair between 1942 and 1944. The types of conventional ordnance identified with the camp included small arms, mortars, artillery, grenades, antitank rockets, pyrotechnics and demolition material (dynamite, TNT). One hundred and ninety-one numbered ranges and many other ranges and targets were planned for and/or constructed to provide training with all authorized infantry weapons. Tanks and Army Air Force aircraft delivering general purpose and blockbuster bombs supported infantry training.

The ASR site inspection team identified current ordnance hazards at Camp Adair. The inspection team found dud mortar rounds lying on the surface of the ground. Interviews disclosed incidents of dud ordnance found in the past that had not been reported to the proper authorities. Expended 60mm and 81mm mortar rounds, 105mm and 155mm artillery rounds, 2.36-inch antitank rockets, and hand grenades buried in the soil could become an OE hazard if exposed to the public by plowing or excavation.

The archive search confirmed that commencing in 1958, the US Air Force acquired portions of the former Camp Adair and established the Adair Air Force Station. At a later date, the Station was to be developed into a Bomarc missile site. The Bomarc missiles were never deployed at Adair Air Force Station. During their tenure, the Air Force built and utilized a skeet range on the cantonment area of Camp Adair. No remnants of the skeet range remain. Historical records did not indicate on site disposal by the Air Force. Aerial photography analysis did not locate any signs of Air Force related on site burial. The archive search and site inspection found no indication of a current ordnance and explosive hazard associated with the Adair Air Force Station.

Camp Adair can be segregated into seven sections, each individually identified by the type of ordnance and explosives used or by the absence of OE use. Each section can be assessed separately, assigned an individualized OE severity and hazard potential, and assigned a different, commensurate level of remediation. This conclusion is discussed further in Sections 2.5 and 2.8 of this report.

This ASR concludes that further action by the DOD for the OE portion of the project is warranted.

2.1.2 Chemical Warfare Materials

The archive search located evidence of chemical warfare material storage and training at Camp Adair. Chemical warfare material features identified at the former Army training camp were four gas chambers on two gas chamber ranges, one gas training range, and toxic gas storage areas. CWM used at the site could have included Chemical Agent Identification Set (CAIS) Gas Detonation Sets, CAIS Identification Sets, and CAIS Decontamination Sets. Chemical mines and riot control agents were also used. The use of vesicant gas (mustard) was confirmed. The ASR inspection team found no evidence of surface CWM contamination or the remnants of the CWM structures. Although the possibility of on site burial of CWM confirmed to have been used at Camp Adair is remote, the final disposition of the CWM remains unknown. It is possible that subsurface CWM contamination still exist beneath the surface within the former gas training areas.

This ASR concludes that further action by the DOD for the CWM portion of the project is warranted.

2.2 HISTORICAL SITE SUMMARY

2.2.1 General

The history of military use of the former Camp Adair/Adair Air Force Station is composed of several distinct periods that started in early 1941 and continues to the present. Acquisition of lands for the camp was initiated by the Army during 1941. Training of Army divisions spanned most of the Second World War. A period of Navy use commenced in 1944 and continued through 1946. During 1945 and 1946, portions of the camp was used as a Prisoner of War (POW) Camp. After several years of inactivity, the cantonment portion of Camp Adair was used as an Air Force Station between 1958 through 1969. Also, commencing in 1946, portions of Camp Adair were transferred to the Oregon National Guard Bureau.

2.2.1.1 Army Use

In February 1941 as the world atmosphere grew tenser, United States involvement into a major conflict seemed imminent. The Army began plans for the construction of several training bases throughout the United States, including the Willamette Valley in Oregon. Specifications for a training base included an area with approximately 65,000 acres of land with about 2,000 acres of level land for the construction of buildings, access to a railroad, a water supply, and an electrical supply. The remaining acreage needed to have rolling hills, light woods with an area of about five miles by ten miles for a field artillery range. Sites all over Oregon were considered and on 15 August 1941, a site north of

Corvallis, Oregon was chosen. Intensive work began on layout plans for buildings, utilities, the water supply, and roads needed for the camp.

Engineering and architectural firms were contracted, land was acquired, and construction began in January 1942 on the new triangular division training camp. This meant that from squad to regiment, all division elements were in three's. One element would fix the enemy, one would maneuver against him, and the third acted as a reserve. On 15 March 1942, the site was designated Camp Adair. Additional land was needed for use as an artillery range. Several areas were considered but land north and adjacent to Camp Adair was selected. On 14 June 1942, a Board of Officers selected the site that included approximately 36 square miles of land to be procured for use as an artillery range.

Four US Army infantry divisions and support units trained at Camp Adair. The 96th "Deadeye" Infantry Division was activated at Camp Adair on 15 August 1942, and trained there until 10 May 1943. On 15 September 1942, the 104th "Timberwolf" Infantry Division was activated at Camp Adair and remained there until 7 August 1943. The next group to be activated at Camp Adair was the 70th "Trailblazer" Infantry Division on 15 June 1943. This group remained there until 29 July 1944. The 91st "Powder River" Infantry Division was activated at Fort Lewis, Washington, but later moved to Camp Adair on 2 November 1943. They remained there until 30 March 1944.

On 30 June 1944, 45,461 acres of Camp Adair was declared surplus and recommended for sale for agricultural and grazing purposes. The Office of the Chief of Engineers monthly progress report dated 31 August 1944, certifies 45,460 acres of Camp Adair were excessed to the Reconstruction Finance Corporation by 31 July 1944. On 28 October 1944, the War Department determined 11,303 acres of Camp Adair was excess to their needs and placed it in the category of surplus. The Commanding General of the Ninth Service Command began preparing the camp for transfer to the Chief of Engineers for its eventual disposal. Effective 8 January 1945, portions of Camp Adair were placed in active status so that the Ninth Service Command could operate a Class I storage facility. This area was bounded by Avenue E, north and south; 12th Street, north; the main line of the Southern Pacific Railroad; and housing and related facilities required for operation.

By 31 January 1945, 3,025 acres were outleased for agricultural purposes. By 15 March 1945, portions of Camp Adair were withdrawn from the category of surplus and placed in an inactive status under the Commanding General, Ninth Service Command. The War Department transferred 471 acres of land to the Navy for use as a hospital with an exclusive permit to use certain buildings and areas within the cantonment area.

Effective 4 June 1945, those portions of Camp Adair required by the Army Ground Forces for the establishment of a Class I installation was returned to active status and was established as a Class II installation, known as Army Ground Forces Depot #4. General Order Number 1 dated 1 July 1945, established the Army Ground Forces Replacement Depot Number 4 at Camp Adair. All Army Ground Forces Replacement Depot Number 4 personnel would be transferred by 15 November 1945.

The War Department declared Camp Adair surplus and was assigned to the War Assets Administration (WAA) by the Chief of Engineers on 17 April 1946, for disposition under the Surplus Property Act. On 15 May 1946, the WAA transferred the property, minus the cantonment area to the Department of Agriculture for sale by the Federal Land Bank as agricultural land. In November 1946, the Oregon State College acquired the former hospital area and began converting it into apartment buildings for use by returning veterans who had enrolled for courses under the GI benefits. This area became known as Adair Village. By June 1951, the Oregon State College closed Adair Village.

2.2.1.2 Navy Usage

By 31 May 1944, the Army Air Forces made available the Corvallis Army Air Field to the Navy on a temporary, full time basis. The Thirteenth Naval District under the US Naval Air Center, Seattle (with administrative control of the Marine Corps functions respecting personnel and equipment directly under the Commandant of the US Marine Corps Commandant) established the Marine Corps Air Facility Corvallis, Oregon. This airfield was secured for the use of MAG-35 with one VJ squadron attached and operated as a replacement training unit for VMJ pilots. Navy/Marine Corps pilots operating out of this airfield conducted bombing and gunnery practice on the artillery range. Aerial photographs taken in 1944 show two bombing targets in the Camp Adair artillery ranges.

By April 1945 the Navy recommended the artillery range property be acquired. However, the Army Ground Forces decided to reactivate Camp Adair and its artillery range for its exclusive use. A Navy Department letter dated 30 June 1945, states that the area was not available for transfer but possibly could be used jointly by the Army and Navy.

The Federal Board of Hospitalization recommended additional hospital facilities be procured for returning Pacific theater war casualties. On 17 November 1944, the War Department issued a temporary permit to the Navy for the operation of the Army Station Hospital at Camp Adair for use as a naval hospital. The Army hospital was in surplus category and had been deactivated. On 24 April 1945, the War Department transferred the former Camp Adair hospital consisting of 451.83 acres of land and improvements to the US Navy. On 11 June 1945, a memorandum of agreement between by the Army and

Navy was issued. This agreement included a revocable permit effective 1 July 1945 for both Army and Navy usage of the hospital and other facilities. On 25 March 1946, the Secretary of the Navy advised the US Naval Hospital Corvallis that it would be disestablished effective 31 May 1946.

2.2.1.3 POW Camp

General Order #32 Army Service Forces Headquarters, Ninth Service Command, dated 29 March 1945, established a Prisoner of War Camp at Camp Adair effective 1 April 1945. This POW camp was used for German and Italian prisoners with a capacity for 1,000 prisoners. General Order #65 Headquarters Ninth Service Command discontinued the Prisoner of War camp effective 25 April 1946.

2.2.1.4 Air Force/Air Defense Command Usage

During the 1950s, the need for an effective air defense system to protect the United States from attack was realized. The Semi-Automatic Ground Environment (SAGE) became that system for the Air Force. SAGE was a network of permanent radar stations located at strategic points overlooking the Pacific Ocean. These radar stations provided overlapping coverage between the sites in case of equipment malfunction. Between 1957 and 1960 SAGE facilities were constructed and became operational.

During the early part of 1955, the Air Force became interested in acquiring land on the former Camp Adair for a SAGE facility. This land had been under license to the State of Oregon for use by the National Guard. By 29 November 1955, the Chief of Engineers granted immediate right of entry access to the Air Force for construction purposes. On 1 September 1958, General Order Number 15 activated the 4625th Air Base Squadron at Camp Adair Air Force Station. It was assigned to the 25th Air Division with the mission of supporting the Portland Air Defense Sector furnishing supplies and equipment in support of the Sector's mission, administering all records and reports pertaining to personnel, and to monitoring the status of construction of base housing and support buildings. On 19 November 1958, the Air Force accepted the massive steel and concrete building constructed to house electronic equipment that coordinated surveillance activities in the Pacific Northwest area. On 26 January 1959, General Order 5 redesignated Camp Adair Air Force Station to Adair Air Force Station.

Adair Air Force Station became headquarters of the 26th Air Division (NORAD) which provided air defense for seven Western states sometime after 1959. During the late 1960s, the Department of Defense began closing and consolidating bases throughout the United States. The Adair Air Force Station closed on 30 September 1969.

During May 1958 the Camp Adair Bomarc Missile base was approved by Congress. However, ensuing battles between the Army and the Senate Armed Service Committee delayed the project for one year. The Bomarc Missile was to provide an area defense for Oregon's coast, from sea level to 100,000 feet and 400 miles out to sea. The Bomarc IM-99B had nuclear capabilities and was fueled by solid propellants. The base was slated to have 28 underground hangars for the missiles, with directional support coming from the SAGE base located three miles to the south. By October 1959 construction began on the 20' by 60' concrete launching pads, with 10 feet high extending steel shelters. On 25 March 1960, the Air Force announced major cutbacks to the Bomarc missile program and by 31 March 1960, with construction more than half complete, the Department of Defense cancelled all Bomarc construction activities at Adair Air Force Station.

On 4 April 1960 Air Defense Command representatives discussed disposition plans for the Bomarc facilities. Early in January 1961 a command directive received initiated the disposal of all real estate in the former Bomarc area. The Adair Air Force Station Missile Site consisting of 199.21 acres of land was declared excess to the needs of the Air Force on 12 February 1964.

2.2.1.5 Oregon Army National Guard

The Draft Environmental Assessment for Implementation of an Integrated Natural Resources Management Plan for Camp Adair, Oregon Army National Guard, dated 15 March 2001, describes activities occurring in the National Guard area.

The Oregon Army National Guard has a 527 acre facility located on the former Camp Adair property. The site is controlled by the US Army Corps of Engineers and is the only remaining piece of Camp Adair used for military purposes. It is located between Sections 8 and 20, Township 10 South, Range 4 West in Benton County. Since the 1960s the Oregon Military Department has licensed the property from the US Army Corps of Engineers for the use by National Guard units conducting small arms training and platoon sized tactical training. The current mission of the property is to provide a local training area for National Guard units in the Willamette Valley for weapons qualification. Other missions include offering training opportunities to other military units and state and local law enforcement agencies.

Training activities include weapons qualifications using small arms and occurs on the known distance range and/or pistol range. Small arms training occurs year round and averages about 48 days per year. Infantry field exercises are also conducted on the property. This training can take place anywhere on the camp but usually is concentrated around Oak Hill or Smith Hill. Infantry training includes land navigation, bivouacing, construction of fortifications or defensive positions, and can include the use of blank

ammunition, pyrotechnics, and smoke. This training occurs year round, averaging thirty days per year. Monthly drills are held at this facility usually occurring on the weekends for platoon or company size groups.

The Oregon Department of Public Safety and Training operates a firing range within the camp for training law enforcement officers. A separate US Army Corps of Engineers license was obtained for this training. This organization usually conducts training on weekdays.

Future plans of the Oregon National Guard include improving the field training areas to keep them functioning and up to date; expansion of the vehicle compound, wash rack, graveled roads, hardened pads for heavy equipment; a laser target system, and construction of a new .50 caliber (plastic) firing range.

2.2.2 Summary of Ordnance and Explosives Activities

2.2.2.1 General

Camp Adair was divided into a cantonment area east of Highway 99 and a live fire and maneuver area west of the highway. Over one hundred and ninety-one numbered ranges were planned to accommodate the training of four infantry divisions (see Figure 2-1).

Training at the Camp Adair/Adair Air Force Station was conducted during four distinct time periods. During the first period, between 1942 and 1945, four Army infantry divisions were trained. Division training included use of small arms, explosives, mortars, artillery, antiaircraft and antitank guns, and support by tanks and Army Air Forces aircraft. During the second period in 1945, Navy and Marine Corps units used the artillery impact areas for aerial bombing and air-to-ground ordnance training. During the third period, between 1955 and 1964, the US Air Force constructed and used a skeet range in the cantonment area, but did not use the numbered ranges. During the final period, from 1946 to the present, the Oregon National Guard obtained use of the Known Distance Rifle Range No. 4.

2.2.2.2 Troops and Weapons

Four infantry divisions trained at Camp Adair during World War II. They include: the 70th Infantry Division from 15 June 1943 to 29 July 1944; the 91st Infantry Division from 2 November 1943 to 30 March 1944; the 96th Infantry Division from 15 August 1942 to 10 May 1943; and the 104th Infantry Division from 15 September 1942 to 7 August 1943. Each triangular division trained at Camp Adair consisted of three Infantry Regiments with additional supporting elements.

Typical weaponry for Infantry Divisions during World War II consisted of the following.

155mm Howitzer	105mm Howitzer and Antitank Guns
81mm Mortar	60mm Mortar
57mm Gun	37mm Gun
Rocket Launcher 2.36" Anti-Tank	Machinegun .50 caliber
Machinegun .30 caliber, Heavy	Machinegun .30 caliber, Light
Carbine .30 caliber	Rifle .30 caliber
Submachinegun .45 caliber	Pistol .45 caliber

In addition to the typical infantry weaponry, historical documents obtained during the archive search confirm that infantry units training at Camp Adair were supported by tank and aircraft units that operated the following weapon systems:

M3 Tanks: 37mm gun
P-38 aircraft: .50 caliber machinegun
P-39 aircraft: .30 and .50 caliber machinegun and 37mm cannon
B-25 aircraft: 300-pound GP and 500-pound block busters bombs

It was estimated that 265,000 rounds of high explosive ammunition (37mm or larger) were fired by the Army during the last two years of training at Camp Adair on approximately 25,000 acres of the site.

2.2.2.3 Ordnance Magazines/Buildings

Historical maps and building lists (see ASR, Appendix K) describe twenty igloos in the Camp Adair magazine area located in the vicinity of coordinates North 44° 41' 06", West 123° 13' 55" in Benton County, southwest of the cantonment area. The igloos, building numbers TA-012-001 through TA-012-020, measured either 20 feet x 10 feet or 20 feet x 40 feet, were constructed of steel and covered with dirt.

2.2.2.4 Camp Adair Range Index

One hundred and ninety-one numbered ranges were planned for at Camp Adair. Range information obtained from historical maps was overlaid on to Quad maps of the region (see Figure 2-2). In addition to the numbered ranges, other non-numbered ranges and bombing targets were also laid out on Camp Adair. In order to provide additional detail, facilitate identification, and enhance analysis, Camp Adair numbered and non numbered ranges, along with other OE features were grouped into three geographic sectors and displayed separately (see Figures 2-2a, b, and c).

Collected information was not adequate to precisely determine the types of weapons fired or munitions used on each range. Therefore, the weapons and munitions associated with each range is based on a correlation of range identification, on the US Army Division table of equipment, and on technical manuals for ranges of the World War II era.

The primary references used to identified and describe these ranges were Maps #1, #2, and #3, as listed below. These maps are discussed in the ASR, Section 4.4.2.

Map #1 - Camp Adair Corvallis, Oregon Training Aids General Layout, 21 January 1944 (see ASR, Appendix K-1).

Map #2 - Camp Adair Corvallis, Oregon Training Aids General Layout, 26 April 1944 (see ASR, Appendix K-3).

Map #3 - Camp Adair Corvallis, Oregon Training Aids General Layout, 7 July 1945 (see ASR, Appendix K-4).

No. 1 - Known Distance Rifle Range

Known Distance (KD) Rifle Range No. 1 first appears on Map #1 and was used by the Army between 1942-1945. Range No. 1 (as do the other ranges Nos. 2, 3, and 4) appears to have firing points at 100, 200, 300, and 500 yards from the targets. Map #2 also lists the range as a multi-use range No. 39 (unknown type) and No. 40 (1,000-inch Anti-Tank Range). Map #3 lists the range as a rifle range. Range No. 1 was probably used only as a rifle range. Weapons associated with this KD rifle range included the .30 caliber rifle and the .30 caliber carbine.

No. 2 - Known Distance Rifle Range

KD Rifle Range No. 2 first appears on Map #1 and was used by the Army between 1942-1945. Map #2 also lists the range as a multi-use range No. 40 (1000-inch Anti-Tank Range) and No. 41 (1000-inch Anti-Tank Range). Map #3 lists the range as a rifle range. Range No. 2 was probably used only as a rifle range. Weapons associated with this KD rifle range included the .30 caliber rifle, and the .30 caliber carbine.

No. 3 - Known Distance Rifle Range

KD Rifle Range No. 3 first appears on Map #1 and was used by the Army between 1942-1945. Map #2 lists the range as a multi-use range No. 47 (unknown) and No. 41 (1000-inch Anti-Tank Range). Map #3 lists the range as a rifle range. Range No. 3 was

probably used only as a rifle range. Weapons associated with this KD rifle range include the .30 caliber rifle and the .30 caliber carbine.

No. 4 - Known Distance Rifle Range

KD Rifle Range No. 4 first appears on Map #1 and was used by the Army between 1942-1945. Map #2 lists the range as a multi-use range No. 42 (unknown). Map #3 lists the range as a rifle range. Range No. 4 was probably used by the Army only as a rifle range. Use of this range was obtained by the Oregon National Guard in 1946 and continues its use to present. Weapons associated with this KD rifle range include the .30 caliber rifle and the .30 caliber carbine. Historical photograph #303651 shows soldiers firing the M-1 .30 caliber rifle in the vicinity or Range No. 4 (see ASR, Appendix J-13).

No. 5 - Not Assigned

No. 6 - Not Assigned

No. 7 - Not Assigned

No. 8 - Not Assigned

No. 9 - Not Assigned

No. 10 - Not Assigned

No. 11 - 1000-inch Pistol Range

Maps #1 and #2 list it as 1000-inch Pistol Range. Map #3 lists the range as Pistol range, 1000-inch Range. This range was used between 1942-1945. Weapon associated with this range is the .45 caliber pistol.

No. 12 - Not Assigned

No. 13 - Not Assigned

No. 14 - Not Assigned

No. 15 - 1000-inch Pistol Range

The 1000-inch Pistol Range No. 15 first appears on Map #1. On Map #3 the name changes to Pistol Range, 1000-inch. This range was used by the Army between 1942-1945. Weapon associated with this range is the .45 caliber pistol.

No. 16 – Not Assigned

No. 17 – Not Assigned

No. 18 – Not Assigned

No. 19 – Not Assigned

No. 20 - 1000-inch Machine Gun Range

Maps #1 and #2 list this range as a 1,000-inch Machine Gun Range. Map #3 lists the range as Machine Gun, 1000-inch Range. This range was used between 1942-1945. Weapons associated with this range include the .30 caliber light and heavy machinegun and the .50 caliber machine gun.

No. 21 - 1000-inch Machine Gun Range

Maps #1 and #2 list this range as a 1000-inch Machine Gun Range. Map #3 lists the range as Machine Gun, 1000-inch Range. This range was used between 1942-1945. Weapons associated with this range include the .30 caliber light and heavy machinegun and the .50 caliber machine gun.

No. 22 - 1000-inch Machine Gun Range

Maps #1 and #2 list this range as a 1,000-inch Machine Gun Range. Map #3 lists the range as Machine Gun, 1000-inch Range. This range was used between 1942-1945. Weapons associated with this range include the .30 caliber light and heavy machinegun and the .50 caliber machine gun.

No. 23 - 1,000-inch Machine Gun Range

Maps #1 and #2 list this range as a 1,000-inch Machine Gun Range. Map #3 lists the range as Machine Gun, 1000-inch Range. This range was used between 1942-1945. Weapons associated with this range include the .30 caliber light and heavy machinegun and the .50 caliber machine gun.

No. 24 - Proposed Grenade Courts

Map #3 list two range areas as #24. One is located north of the cantonment area, situated between the practice grenade courts and the engineer area. The other proposed grenade court is located south of the cantonment area near the practice grenade courts. These two ranges may not have been constructed or used. If activated, this range would have been used during 1945. Fragmentation hand grenades would have been authorized on this range.

No. 25 - Flame Thrower Area (Proposed)

Flame Thrower Area first delineated on Map #3 and is listed a proposed. Historical photograph #304428 shows a flame thrower being demonstrated to local residents during a 70th Division exercise at the Bradley Bowl during June 1944. It was not determined whether or not Range No. 25 and the Bradley Bowl was the same site (see ASR, Appendix J-18).

No. 26 - Proposed Bayonet Assault Courses

Map #3 delineates two bayonet courses located adjacent to the known distance rifle ranges. These ranges would have been used during 1945. No ordnance or explosives would have been used on this range.

No. 27 - Obstacle Courses

Map #3 shows four obstacle courses. Map #1 lists these ranges as Ranges Nos. 131, 135, and 136. These ranges would have been used between 1942-1945. No ordnance or explosives would have been used on these ranges.

No. 28 - Proposed Close Combat Course (4 Lane)

Map #3 delineates a four lane Close Combat Course located south of the known distance rifle ranges. This range would have been used during 1945. Weapons authorized on this assault course would have included the .45 caliber pistol, the .30 caliber rifle and carbine, and practice grenades.

No. 29 - Not Assigned

No. 30 - 1000-inch Landscape Range

Maps #1 and #2 list this range as Landscape Target 1,000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 31 - 1000-inch Landscape Range

Maps #1 and #3 list this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 32 - 1000-inch Landscape Range

Maps #1 and #3 list this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 33 - 1000-inch Landscape Range

Maps #1 and #2 list this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 34 - 1000-inch Landscape Range

Map #1 lists this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 35 - 1000-inch Landscape Range

Maps #1 and #3 list this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 36 - 1000-inch Landscape Range

Maps #1 and #3 list this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 37 - 1000-inch Landscape Range

Maps #1 and #3 list this range as Landscape Target 1000-inch Range. This range was used between 1942-1945. Although the .22 caliber rifle was the preferred weapon for this type of range, general small arms (.45 caliber and .30 caliber) could have been used on this range.

No. 38 - Not Assigned

No. 39 – 1000-inch Anti-Tank Range

Map #2 shows this range as co-located with KD Rifle Range No. 1. Neither Maps #1 or #3 list this range. It is believed that this range was not built. Sister ranges Nos. 40 and 41 were constructed and used in the Coffin Butte area. However, if this range were built, it would have been used between 1942-1945. Based on Army technical manuals, the .22 caliber ammunition would have been used on this range while conducting anti-tank training.

No. 40 - 1000-inch Anti-Tank Range (at Coffin Butte)

Maps #1 and #2 lists the range as Anti-Tank Range, 1000-inch Range. Map #2 shows this range co-located with KD Rifle Range No. 2. However, Maps #1 and #3 show this range in the Coffin Butte area. It is believed that this range was constructed in the Coffin Butte area. This range was used between 1942-1945. Based on Army technical manuals, the .22 caliber ammunition would have been used on this range while conducting anti-tank training. Available information cannot discount the use of the 2.36-inch anti-tank rocket launcher on this range. A dud 2.36-inch rocket was found less than ½ mile from this range.

No. 41 – 1000-inch Anti-Tank Range (at Coffin Butte)

Maps #1 and #2 lists the range as Anti-Tank Range, 1000-inch Range. Map #2 shows this range co-located with KD Rifle Range No. 3. However, Maps #1 and #3 show this range in the Coffin Butte area. It is believed that this range was constructed in the Coffin

Butte area. This range was used between 1942-1945. Based on Army technical manuals, the .22 caliber ammunition would have been used on this range while conducting anti-tank training. Available information cannot discount the use of the 2.36-inch anti-tank rocket launcher on this range. A dud 2.36-inch rocket was found less than ½ mile from this range.

No. 42 – 1000-inch Anti-Tank Range

Map #2 shows this range as co-located with KD Rifle Range No. 4. Neither Maps #1 or #3 list this range. It is believed that this range was not built. Sister ranges Nos. 40 and 41 were constructed and used in the Coffin Butte area. However, if this range were built, it would have been used between 1942-1945. Based on Army technical manuals, the .22 caliber ammunition would have been used on this range while conducting anti-tank training.

No. 43 - Not Assigned

No. 44 - Not Assigned

No. 45 – 1000-inch Anti-Tank Range

Maps #1 and #2 list the range as Anti-Tank Range, 1000-inch Range. Map #3 renames this range to 37mm Gun, 1,000-inch Range. This range was used between 1942-1945. Based on Army technical manuals, the .22 caliber ammunition would have been used on this range while conducting anti-tank training.

No. 46 – 1000-inch Anti-Tank Range

Maps #1 and #2 list the range as Anti-Tank Range, 1000-inch Range. Map #3 renames this range to 37mm Gun, 1,000-inch Range. This range was used between 1942-1945. Based on Army technical manuals, the .22 caliber ammunition would have been used on this range while conducting anti-tank training.

No. 47 - Not Assigned

No. 48 - Not Assigned

No. 49 - Not Assigned

No. 50 - Thompson Sub-Machine Gun Range

This range is located in the same area as Mini Anti-Aircraft Ranges Nos. 65, 66, and 67, west of Hwy 99. The range was used between 1942-1945. The .45 caliber submachinegun would have been fired on this range.

No. 50A - Thompson Sub-Machine Gun Range

This range is located by Range #50, west of Hwy 99. The range was used between 1942-1945. The .45 caliber submachinegun would have been fired on this range.

No. 51 - Field Combat Range (Thompson Sub-Machine Gun Range)

Range No. 51 was located in the southeastern portion of the main impact area. It was used between 1942-1945. The .45 caliber submachinegun would have been used while maneuvering to the limit of advance on this range.

No. 52 - Not Assigned

No. 53 - Not Assigned

No. 54 - Not Assigned

No. 55 - Not Assigned

No. 56 - Not Assigned

No. 57 - Not Assigned

No. 58 - Not Assigned

No. 59 - Not Assigned

No. 60 - Mini Anti-Aircraft Range

Maps #1 and #2 list this range as a Mini-Anti-Aircraft Range. Map #3 renames this range to Anti-Aircraft Range, Miniature. This range was used between 1942-1945. This range accommodated three types of targets for anti-aircraft training from a single firing point. While conducting training on this range, .22 caliber ammunition was probably used.

No. 61 - Mini Anti-Aircraft Range

Maps #1 and #2 list this range as a Mini-Anti-Aircraft Range. Map #3 renames this range to Anti-Aircraft Range, Miniature. This range was used between 1942-1945. This range accommodated three types of targets for anti-aircraft training from a single firing point. Training on this range probably employed .22 caliber ammunition.

No. 62 - Mini Anti-Aircraft Range

Maps #1 and #2 list this range as a Mini-Anti-Aircraft Range. Map #3 renames this range to Anti-Aircraft Range, Miniature. This range was used between 1942-1945. This range accommodated three types of targets for anti-aircraft training from a single firing point. While conducting training on this range, .22 caliber ammunition was probably used.

No. 63 - Not Assigned

No. 64 - Not Assigned

No. 65 - Mini Anti-Aircraft Range

Maps #1 and #2 list this range as a Mini-Anti-Aircraft Range. Map #3 renames this range to Anti-Aircraft Range, Miniature. This range was used between 1942-1945. This range accommodated three types of targets for anti-aircraft training from a single firing point. While conducting training on this range, .22 caliber ammunition was probably used.

No. 66 - Mini Anti-Aircraft Range

Maps #1 and #2 list this range as a Mini-Anti-Aircraft Range. Map #3 renames this range to Anti-Aircraft Range, Miniature. This range was used between 1942-1945 and accommodated three types of targets for anti-aircraft training from a single firing point. While conducting training on this range, .22 caliber ammunition was probably used.

No. 67 - Mini Anti-Aircraft Range

Maps #1 and #2 list this range as a Mini-Anti-Aircraft Range. Map #3 renames this range to Anti-Aircraft Range, Miniature. This range was used between 1942-1945. This range accommodated three types of targets for anti-aircraft training from a single firing point. While conducting training on this range, .22 caliber ammunition was probably used.

No. 68 - Not Assigned

No. 69 - Not Assigned

No. 70 - Anti-Aircraft Ranges

Map #1 describes No. 70 as Anti-Aircraft Range. Map #2 renames the range to Field Combat Range. Map #3 renames this range Anti-Aircraft Range, Towed. This range was used between 1942-1945. Anti-aircraft training on this range would have used both .30 caliber and .50 caliber guns and ammunition.

No. 71 - Anti-Aircraft Ranges

Map #1 lists this range as Anti-Aircraft Range, Maps #2 and #3 do not list Range #71. A location for this range was not found on any of the three maps. If it were built, the range would have the same features as Range No. 70 and use the same type of weapons and ammunition.

No. 72 - Proposed Moving Target Range

Maps #1 and #2 list Range No. 72 as proposed moving target range. Map #3 does not list the range. It could not be determined if this range was built or not nor the type of weapons that would have been authorized on this range. The proposed location of this range was in areas where the Field Combat Ranges were constructed. If this range were constructed, per AR 750-10 and TM 9-855, authorized munitions would include small arms, 37mm APC, and 75mm AP, depending on the type of moving target constructed.

No. 73 - Proposed Moving Target Range

Maps #1 and #2 list Range No. 73 as proposed moving target range. Map #3 does not list the range. It could not be determined if this range were built or not nor the type of weapons that would have authorized on this range. The proposed location of this range was in areas where the Field Combat Ranges were constructed. If this range were constructed, per AR 750-10 and TM 9-855, authorized munitions would include small arms, 37mm APC, and 75mm AP, depending on the type of moving target constructed.

No. 74 - Not Assigned

No. 75 - Field Combat Range/Moving Target Range

Maps #1 and #2 list this range as a Field Combat Range. Map #3 renames Range No. 75 to Moving Target Range. This range was used between 1942-1945. Range No. 75 was located in the southwestern portion of the camp and was supported by trails running parallel to the firing line approximately 1,000 and 1,500 yards down range. The end of the range fan was against the forward slope of a mountain ridgeline. It is believed that this range was used as a moving target. Authorized munitions would include small arms, 37mm APC, and 75mm AP, depending on the type of moving target constructed.

No. 76 - Fortified Training Area

Maps #1 and #2 list this range as a fortified training area. Map #3 lists this range as No. 22 "Jap" Pillbox Area. This range was used between 1942-1945. Thirteen concrete pillboxes were constructed in this area to simulate fortified Japanese positions in the Pacific Ocean. Nearly all conventional weapons in the US Army infantry division inventory would have been used on this range. Authorized weapon would include small arms, machineguns, mortars, and the 105mm and 155mm howitzers. Hand grenades, explosive charges, and flame throwers could also have been used.

No. 77 - Not Assigned

No. 78 - Not Assigned

No. 79 - Not Assigned

No. 79A - Moving Target Range

Maps #1 and #2 list this range as a moving target range. Map #3 does not list this range. This range was used between 1942-1945. This range had a road system running parallel to the firing line approximately 1500 to 2000 yards down range. The depth of the safety fan (5000 yards) ending on the forward slope of a ridgeline would indicate the use of 37mm, 57mm, and 105mm anti-tank weapons. Several 105mm and duds were found on the impact area of this range. A historical photograph found during the archive search shows soldiers firing a 105mm anti-tank gun at Camp Adair.

No. 79B - Moving Target Range

Maps #1 and #2 list this range as a moving target range. Map #3 does not list this range. This range was used between 1942-1945. This range had a road system running parallel to the firing line approximately 1,500 to 2,000 yards down range. The depth of the safety

fan (5,000 yards) ending on the forward slope of a ridgeline would indicate the use of 37mm, 57mm, and 105mm anti-tank weapons. Dud 105mm rounds were found on the impact area of this range.

No. 80 - Field Combat Range (Pits)

Maps #1 and #2 list this range as a field combat range. Map #3 renames the range to Field Target Range, Rifle and Light M.G. This range was used between 1942-1945. Authorized weapons would have included the .30 caliber rifle and carbine and the .30 caliber light machinegun.

No. 80A - Field Combat Range (Pits)

Maps #1 and #2 list this range as a field combat range. Map #3 renames the range to Field Target Range, Rifle and Light M.G. This range was used between 1942-1945. Authorized weapons would have included the .30 caliber rifle and carbine and the .30 caliber light machinegun.

No. 80B - Field Combat Range (Pits)

Maps #1 and #2 list this range as a field combat range. Map #3 renames the range to Field Target Range, Rifle and Light M.G. This range was used between 1942-1945. Authorized weapons would have included the .30 caliber rifle and carbine and the .30 caliber light machinegun.

No. 81 - Field Combat Range (Pits)

Map #3 renames the range to Field Target Range, Machine Gun. This range was used between 1942-1945. This range was used between 1942-1945. Authorized weapons would have included .30 caliber light and heavy machineguns.

No. 82 - Not Assigned

No. 83 - Field Combat Range (Pit)

Maps #1 and #2 list the range as a field combat range No. 83, but Map #3 no longer lists this range. This range was used between 1942-1945. This range is one of a string of 14 combat ranges that ring the major impact area in the northern sector of Camp Adair. On these field combat ranges, live-fire combat maneuver and support coordination exercises were conducted. These exercises included support by tank and aircraft units. All infantry conventional weapons were authorized on this range. Weapons used on these ranges

include the .30 caliber rifle, automatic rifle, and carbine, the .30 caliber light and heavy machine guns, the .50 caliber heavy machinegun, anti-tank guns, the 105mm and 155mm howitzers, and 300-pound GP bombs from aircraft. The archive search was not able to obtain information that could definitely associated specific weapons with specific combat ranges. Historical photographs 304147, 304148, and 304179 depict training in the Combat Ranges (see ASR, Appendix J-16, J-15, and J-6).

No. 84 - Field Combat Range (Pit)

Maps #1 and #2 list the range as a field combat range No. 84, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 84A - Field Combat Range

Maps #1 and #2 list the range as a field combat range No. 84A, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 85 - Field Combat Range (Pits)

Maps #1 and #2 list the range as a field combat range No. 85, but Map #3 no longer lists this range. This range was used between 1942-1945. The location of this range was not found on any of the three maps. If the range were built, training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 86 - Field Combat Range

Maps #1 and #2 list the range as a field combat range No. 86, but Map #3 no longer lists this range. Map #1 lists a 60mm dud being found in the vicinity of this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 86A - Field Combat Range

Maps #1 and #2 list the range as a field combat range No. 86A, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 87 - Field Combat Range (Pits)

Map #1 indicates a 105mm dud has been found in this area, though other range fans intersect with this range. Map #3 no longer lists this range. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 87A - Field Combat Range (Pits)

Maps #1 and #2 list the range as a field combat range No. 87A, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 87B - Field Combat Range

Maps #1 and #2 list the range as a field combat range No. 87B, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 88 - Field Combat Range (Pit)

Maps #1 and #2 list the range as a field combat range No. 88, but Map #3 no longer lists this range. Map #1 list a 105mm dud being found in this area, though other range fans intersect the range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 89 - Field Combat Range (Pit)

Maps #1 and #2 list the range as a field combat range No. 89, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 89A - Field Combat Range

Map #2 lists the range as a field combat range No. 89A, but Map #1 and #3 do not list this range. This range was used between 1944-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 89B - Field Combat Range

Maps #1 and #2 list the range as a field combat range No. 89B, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 89C - Field Combat Range

Maps #1 and #2 list the range as a field combat range No. 89C, but Map #3 no longer lists this range. This range was used between 1942-1945. Training conducted and authorized weapons would be similar to that of Field Combat Range No. 83.

No. 89D - Field Combat Range

Map #2 lists this range as a field combat range. Maps #1 and #3 do not list the range. This range was used between 1942-1945. Training and weapons would be similar to that of Field Combat Range No. 83. The location for this range was not found.

No. 90 - Mortar Range

Maps #1 and #2 list this range but not Map #3. This range does not have a standard range fan. Numerous other ranges intersect the impact area for this range. This range was used between 1942-1945. This range was probably a 60mm mortar range. Map #1 shows that a 60mm mortar dud round was found on this range.

No. 91 - Mortar Range

Maps #1 and #2 list this range but not Map #3. Map #1 indicates a 60mm dud has been found in the vicinity, though numerous other range fans intersect this range. This range was used between 1942-1945. This range does not have a standard range fan. The 60mm mortar was probably fired in this range.

No. 92 - Not Assigned

No. 93 - Not Assigned

No. 94 - Not Assigned

No. 95 - Not Assigned

No. 96 - Not Assigned

No. 97 - Not Assigned

No. 98 - Not Assigned

No. 99 - Not Assigned

No. 100 - Not Assigned

No. 101 - Not Assigned

No. 102 - Not Assigned

No. 103 - Not Assigned

No. 104 - Not Assigned

No. 105 - Not Assigned

No. 106 - Not Assigned

No. 107 - Not Assigned

No. 108 - Not Assigned

No. 109 - Not Assigned

No. 110 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 111 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 112 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 113 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range. This range was not located on any of the three maps.

No. 114 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range. This range was not located on any of the three maps.

No. 115 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 116 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 117 - Bayonet Course

Maps #1, #2, and #3 list this as a bayonet course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 118 - Not Assigned

No. 119 - Not Assigned

No. 120 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range.

No. 121 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range.

No. 122 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range.

No. 123 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range. This range was not located on any of the three maps.

No. 124 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range. This range was not located on any of the three maps.

No. 125 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range.

No. 126 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range.

No. 127 - Practice Grenade Court

Maps #1, #2, and #3 list this as a practice grenade court. This range was used between 1942-1945. Practice and/or training hand grenades would have been used on this range.

No. 128 - Not Assigned

No. 129 - Live Hand Grenade Court

Maps #1 and #2 list this as a live hand grenade court. Map #3 does not list it. This range was used between 1942-1945. Fragmentation and practice grenades would have been authorized in this area. Hand grenade duds were found by local residents in this area. A second live hand grenade court was identified in the vicinity of coordinates N44° 44' 29" and W123° 18" 13". This area was not designated as a numbered range.

No. 130 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 131 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 132 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 133 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 134 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 135 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 136 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 137 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 138 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 139 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 140 - Obstacle Course

Maps #1, #2, and #3 list this range as an obstacle course. This range was used between 1942-1945. No ordnance or explosives would have been used on this range.

No. 141 - Infiltration Range

Maps #1 and #2 list this range as an infiltration range. It was used between 1942-1945. Historical photographs 303644, 303684, and 30685 shows soldiers crawling through the infiltration ranges (see ASR, Appendices J-1, 2, and 3). The photographs show and discuss the use of overhead machinegun fire, static demolition explosives, and smoke. The photographs also show the use of barbed wire. Ordnance and explosives used on infiltration ranges would include .30 caliber ammunition and explosives (dynamite, TNT, and blasting caps).

No. 142 - Infiltration Range

Maps #1 and #2 list this range as an infiltration range. It was used between 1942-1945. Ordnance and explosives used on infiltration ranges would include .30 caliber ammunition and explosives (dynamite, TNT, and blasting caps).

No. 143 - Infiltration Range

Maps #1 and #2 list this range as an infiltration range. It was used between 1942-1945. Ordnance and explosives used on infiltration ranges would include .30 caliber ammunition and explosives (dynamite, TNT, and blasting caps).

No. 144 - Not Assigned

No. 145 - Not Assigned

No. 146 - Not Assigned

No. 147 - Not Assigned

No. 148 - Not Assigned

No. 149 - Not Assigned

No. 150 - Nazi Village

Maps #1 and #2 list this range as a Nazi Village, but Map #3 does not list the range. This area was used between 1942-1945. The area designated for training at the mock German village was approximately 100 yards square. This would indicate that neither ordnance nor explosives were used on this range. An historical photograph found during the archive search that shows troops training in the mock village.

No. 151 - Nazi Village

Maps #1 and #2 list this range as a Nazi Village, but Map #3 does not list the range. This area was used between 1942-1945. The area designated for training at the mock German village was approximately 100 yards square. This would indicate that neither ordnance nor explosives were used on this range.

No. 152 - Not Assigned

No. 153 - Not Assigned

No. 154 - Not Assigned

No. 155 - Not Assigned

No. 156 - Not Assigned

No. 157 - Not Assigned

No. 158 - Not Assigned

No. 159 - Not Assigned

No. 160 - Transition Course

Maps #1 and #2 describe this range as a transition course but Map #3 renames the range to Transition Firing Course Range. This range was used between 1942-1945. The transition course provided targets for soldiers transitioning down-range to the limit of advance. Authorized weapons on this course would be the .30 caliber rifle, carbine, and automatic rifle.

No. 161 - Not Assigned

No. 162 - Not Assigned

No. 163 - Not Assigned

No. 164 - Not Assigned

No. 165 - Not Assigned

No. 166 - Not Assigned

No. 167 - Not Assigned

No. 168 - Not Assigned

No. 169 - Not Assigned

No. 170 - Close Combat Course

Maps #1 and #2 list this range as a close combat course. Map #3 does not list this range. The range is located in between Know Distance Ranges No. 3 and No. 4 and was used between 1942-1945. General small arms and practice hand grenades would have been authorized on this course.

No. 171 - Close Combat Course

Maps #1 and #2 list this range as a close combat course. Map #3 does not list this range. The range is located in between Know Distance Ranges No. 3 and No. 4 and was used between 1942-1945. General small arms and practice hand grenades would have been authorized on this course.

No. 172 - Close Combat Course

Maps #1 and #2 list the range as a close combat course. Map #2 shows the range located in the southwestern corner of the camp and less than 500 yards from the Camp Adair boundary. Map #3 does not list the range. This range was used between 1942-1945. Typical close combat courses require from 1,500 to 3,500 yard safety fans beyond the limit of advance. No safety fans are drawn around this range. Also, from the size of the area drawn for this range and because of its close proximity from the camp boundary, it is assumed that live fire exercises were not conducted on this close combat course.

No. 173 - Not Assigned

No. 174 - Not Assigned

No. 175 - Not Assigned

No. 176 - Not Assigned

No. 177 - Not Assigned

No. 178 - Not Assigned

No. 179 - Not Assigned

No. 180. Gas Chamber

Maps #1 and #2 list the gas chamber. Map #3 renumbers it to Range No. 17. The Army used this gas chamber between 1942-1945.

No. 181 - Gas Chamber

Maps #1 and #2 list the gas chamber. Map #3 renumbers it to No. 17. The Army used this gas chamber between 1942-1945.

No. 182 - Gas Area

Map #1 lists this range as a gas area. Map #2 lists this area as a gas chamber. Map #3 does not list this area. This area was used between 1942-1945.

No. 183 - Not Assigned

No. 184 - Not Assigned

No. 185 - Not Assigned

No. 186 - Not Assigned

No. 187 - Not Assigned

No. 188 - Not Assigned

No. 189 - Not Assigned

No. 190 - Embarking Device

Maps #1 and #2 list Range No. 190 as an embarking device. This area was located in the cantonment area and was used between 1942-1945. No ordnance or explosives were used in the area of this training device.

No. 191 - Embarking Device

Maps #1 and #2 list Range No. 191 as an embarking device. This area was located in the cantonment area and was used between 1942-1945. No ordnance or explosives were used in the area of this training device

Non-numbered Ranges, Bombing Targets, and Danger Areas

In addition to the numbered ranges listed above, historical documents identified non-numbered ranges, proposed ranges, bombing targets, and danger areas that were laid out at Camp Adair during the 1942-1945 period. The archive search could not confirm construction of some of the proposed ranges, or conclusively attribute origin, using unit, or ordnance used on these ranges and targets.

1. Engineer Area

Maps #1, #2, and #3 list an engineer area. This area was used for construction of pontoon bridges, fording rivers, and the demolition of bridges. Historic still photographs showed explosive charges being set off by engineers. Explosives may have been used on this engineer area during 1942-1945.

2. Proposed Grenade Courts Near Engineer Area

Map #3 lists proposed grenade court No. 24. No other maps mention this area, therefore, it may not have been built. If built, most likely usage of this area would have been 1945.

3. Proposed Live Grenade Courts near Practice Grenade Courts

Map #3 lists proposed grenade courts to be located near the practice grenade courts south of the cantonment area. No other map mentions this area; therefore, it may not have been built. If built, most likely usage of the area would have been during 1945.

4. New grenade court

A Federal Land Bank of Spokane letter states that a hand grenade assault course was used by the military in the Glender's Butte area approximately in Sections 23 and 26 of Township 10 South, Range 5 West. The archive search could not confirm either the construction of or the location of this grenade course.

5. Bombing Target #1

None of the historic layouts obtained show the bomb targets. However, 1944 aerial photography shows this bomb target located in northeastern portion of the artillery impact area at coordinates N°44 48' 36", W123° 15' 54". Estimated use date is 1942-1945. The aerial photograph shows numerous large craters surrounding this bombing target.

Although the archive search could not confirm the origins of this target, using units, or the type of ordnance dropped, it is believed that this target was used by the Navy/Marine Corps operating out of Corvallis, Oregon.

On 9 June 1945, the Corvallis Bombing and Gunnery Area was established. This area was approved for Navy air-to-ground gunnery, practice and live rockets, strafing, and dive and medium bombing. Listed below are the boundary coordinates of the bombing and gunnery area.

Lat. 44° 52' 15"N, Long. 123° 26' 00"W
Lat. 44° 51' 00"N, Long. 123° 14' 00"W
Lat. 44° 44" 45"N, Long. 123° 12' 15"W
Lat. 44° 45' 15"N, Long. 123° 24' 45"W

6. Bombing Target #2

None of the historic layouts obtained show the bomb targets. However, 1944 aerial photography shows this bomb target located in the main impact area at coordinates N44° 45' 36"W123° 15' 00". Estimated use date is 1942-1945. The aerial photograph shows numerous large craters surrounding this bombing target.

Although the archive search could not confirm the origins of this target, using units, or the type of ordnance dropped, it is believed that Bombing Target #2 was used by the Navy/Marine Corps operating out of Corvallis, Oregon.

7. Bombing Ranges Located in the Artillery Range

This set of ranges was used by the Army Air Forces in support of Division training at Camp Adair. These ranges were located north of Suver Road in the vicinity of Range No. 76, the Fortified Training Area. A news article dated 20 July 1943, describes a demonstration taking place on Camp Adair ranges. Airplanes from Portland and Seattle using P-38, P-39, and B-25 aircraft bombed the artillery ranges using 300 and 500-pound block busters. The airplanes also demonstrated the use of cannons and heavy machine guns. During this demonstration, units from the 104th Division fired medium and heavy artillery, light and heavy machine guns, mortars, automatic rifles, and rifles.

On 30 August 1943, the Fourth Air Force requested use of the Camp Adair artillery range as a high altitude bombing range. Units stationed in the Portland, Oregon, area needed additional bombing ranges. It is not known if the Fourth Air Force was granted this request.

On 10 April 1945, the Army Air Forces Board Florida visited Portland Army Air Field regarding the establishment of a temporary bombing range within 50 to 75 miles of Portland, Oregon. Camp Adair though already in surplus category was being considered for the bombing range since it had already been used for an artillery range and maneuver area. The AAF Board was working on project "Q 4483 Differential Ballistic Winds" involving 500-pound bombs using fragmentation clusters and incendiary clusters. The range would be needed for two or three months and would only require one building and scoring rings which would be provided by the Fourth Air Force.

8. Interdepartmental Air Traffic Control Board Danger Area

The Interdepartmental Air Traffic Control Board (IATCB) Meeting Number 113 during 1942 recommended approval of the Camp Adair Artillery Range on 7 July 1942. The range included an area connected by straight lines from the towns of Monmouth, Falls City, Pedee, and Suver. This area was designated a Danger Area published in the CAA Weekly Notices to airmen, and plotted on Coast and Geodetic Survey Aeronautical Charts.

In the Interdepartmental Air Traffic Control Board Meeting Number 618 dated 18 May 1945, recommended the Camp Adair artillery range for use as a bombing and gunnery range. The Commander Naval Air Bases Thirteenth Naval District received approval of a Danger Area for use by the Naval Auxiliary Air Station Corvallis for air-to-ground gunnery, practice and live rockets, strafing, dive and medium altitude bombing. The boundaries of the Danger Area are similar to the previously approved Corvallis Bombing and Gunnery Area except at the northwestern corner.

The Army Ground Forces submitted a request to the Interdepartmental Air Traffic Control Board in Meeting Number 629 dated 20 June 1945, for the approval of an artillery range for Camp Adair. The area requested had been previously used as an artillery range in the past but portions of it were withdrawn by the Naval Auxiliary Air Station Corvallis for use as a gunnery area. Army Ground Forces advised the IATCB that the area had not been transferred to the Navy. The Navy Department withdrew its request for the area since the Army stated it had an urgent need for an artillery range. The IATCB approved the artillery range for firing 155mm and 105mm Howitzers, small arms, and with firing point dispersed within the area with the maximum ordinate not exceeding 17,660 feet.

Interdepartmental Air Traffic Control Board Meeting Number 687 dated 6 November 1945 rescinded the Danger Area approved in meeting number 629. The War Department was advised by the Army Ground Forces that the area was no longer required.

2.2.2.5 Air Force Rifle/Skeet Range No. 580

A circa 1960 Air Force Station map depicts a skeet range, (Building No. 580) located northeast of the tennis court and southwest of the sewage treatment plant at coordinates N44° 40' 27", W123° 12' 57". Most likely use of this range was between 1955-1964 (see ASR, Appendix K-15). No other Air Force range or other areas of potential OE hazards was found on the former Adair Air Force Station during this archive search.

2.2.2.6 Unexploded Ordnance Found in the Past

On layouts of Camp Adair, (see Figures 2-1 and 2-2), the location of duds found on Camp Adair prior to the ASR site inspection are shown. Additionally, three documented incidents of unexploded ordnance on Camp Adair were found.
A 2.36-inch anti-tank rocket was found by local residents in the area of the Parade Field, coordinates N44° 42' 48", W123° 13' 24", in the central portion of Camp Adair adjacent to Highway 99.

On 22 August 1951, the State of Oregon Military Department was informed of a fuzed 81mm mortar that was found near Camp Adair. A demolition team from Fort Lewis dispatched to the area, exploded the mortar, and picked up several other duds found in the same area. These duds were reported to be harmless, practice shells.

On 11 June 1986, one 81mm white phosphorous mortar was unearthed by a farmer's plow near Monmouth, Oregon. The mortar burned after the plow tore it apart. An Army ordnance detachment from Vancouver Barracks blew up the detonator but did not have the manpower to sweep the area for additional potential hazards. Arrangements were

made for Oregon National Guard personnel to sweep the farmer's field using metal detectors. The twelve-person National Guard squad from the 1249th Engineer Battalion, Company C swept the field. After six hours of searching no further ordnance was discovered. The Oregon National Guard unit declared the farm field safe from military explosives. A Gazette Times article discusses numerous army munitions being found in farmers field since World War II. The ordnance items ranged in size from mortars, howitzer shells, to hand grenades.

2.2.3 Summary of Chemical Warfare Material Activities

Investigation of historical records revealed the use and storage of chemical warfare materials at Camp Adair. Documentation and photographs indicated that chemical warfare training was conducted at Camp Adair.

2.2.3.1 CWM Buildings

The following list describes CWM buildings that were used for storage or instruction.

Type	Size	Bld. Number
Gas Instruction	20 x 100	TA-104
Gas Instruction	20 x 100	TA-108
Gas Instruction	20 x 100	TA-173
Gas Instruction	20 x 100	TA-174
CWS Warehouse		T-4-213
CWS Office		T-4-202
CWS Ammunition House #1 and #2		
CWS Ammunition Igloo #1 and #13		

2.2.3.2 Gas Area

According to the Camp Adair Training Aids General Layout map dated 21 January 1944, Range Nos. 180 and 181 are listed as Gas Chambers and No. 182 as a Gas Area. These areas are probably where gas chamber training and decontamination exercises were conducted. Historical photograph 304414 shows one of the buildings (TA-108) that was used as a gas chamber (see ASR, Appendix J-9).

2.2.3.3 CWM Training Exercises

Chemical Warfare was an important element of training at Camp Adair. Routine instructional courses along with practical exercises prepared soldiers for potential

battlefield situations. Training included gas chamber exercises, gas identification, decontamination procedures, and instruction in handling incendiaries.

Historical photograph 304414 shows medics entering a gas chamber at the Chemical Warfare Training Area during combat training during 1944. Historical photographs 303699 and 303700 show members of a Chemical Warfare Service decontamination squad demonstrating the correct method for decontaminating areas contaminated by vesicant gas (mustard) (see ASR, Appendix J-12 and J-14). Photograph 303699 shows a sign near the range saying "Danger Gas HS" and individuals are wearing gas masks and rubber suits. Training with incendiary bombs was also conducted at Camp Adair. Historical photograph 303697 shows training on the correct method of handling and disposing of an incendiary bomb (see ASR, Appendix J-5).

The Chemical Warfare Section conducted regular prescribed 30-hour courses for gas NCOs and other non-division units at Camp Adair. After receiving training the NCOs in turn conducted 12-hour gas training courses for the men in their units. Emphasis was placed on fire control for incendiary bombs as well as proficiency with gas masks, gas chamber drills, and gas identification.

Between 18 January and 8 February 1944, a technical training inspection was conducted for the purpose of inspecting the state of Chemical Warfare training of units of the Army Ground Forces in the Ninth Service Command. The philosophy of the Commanding General of the 70th Infantry Division regarding chemical warfare training included classroom instruction with practical field applications under simulated battle conditions. While inspecting Camp Adair, this philosophy was demonstrated and tested. A front of about 300 yards with a natural avenue of approach was assigned. Prior to the commencement of the exercise, a suitable number of one-gallon filled tins of 80% MR (molasses residuum) and 20% H (mustard) mixture were exploded to contaminate the area. "The presence of real mustard was easily detected and gave realism to the exercise." Smoke pots were electrically fired during the exercise to simulate mortar and artillery attack. Troops then traversed through the area, applying their chemical warfare training skills. This inspection described troops forgetting or at least not properly adhering to their chemical warfare training and getting burned by the mustard. None of the documentation provided a location for this training.

On January 1944 the 70th Infantry Division Trailblazers began a 30-hour, two week training course in Chemical Warfare. The training encompassed every aspect of chemical warfare including: adjusting a gas mask, neutralizing chemical landmines, decontamination methods, and techniques of handling frangible grenades and anti-personnel bombs. Classes were taught in the 370th Medical Battalion recreation hall and area. In July 1944, chemical warfare classes demonstrated decontamination procedures

using mustard contaminated vehicles. None of the documents obtained provided a location for this training.

2.2.4 Certificates of Clearance

2.2.4.1 Certificates

A War Department letter dated 14 August 1946, describes dedudding activities at various bases across the United States. It states Camp Adair, Oregon, consisting of 53,673 acres has been dedudded so as to make it reasonably safe for any use.

On 21 March 1947, a Certificate of Clearance for Camp Adair was issued. It stated that Camp Adair was inspected and is clear of all explosives or explosive objects reasonably possible to detect by visual inspection. It recommended Tract A-38, the southern portion of Tract A-27, and Tract A-63 (Lewisville Cemetery) be restricted to grazing or timbering activities. The remaining land is recommended for any use for which the land is suited.

A certificate issued on 21 October 1948, states that the cantonment area of Camp Adair consisting of buildings, roads, and streets was not used by the Department of the Army for the training of troops with the firing or use of artillery, rifles or hand grenades. Therefore, no dedudding or decontamination was necessary and the area was fit for use for all purposes.

2.2.4.2 Clearance Activities

The Office of Real Property Disposal, Property Management Division correspondence dated 3 December 1946, stated "it is felt that the area [Camp Adair] will never be 100% safe for any use." The Corps of Engineers must recommend contaminated areas to be restricted to grazing purposes only.

An inspection report dated 21 March 1947 was filed with the Division Engineer, North Pacific Division, Portland, Oregon. It described two different clearance activities at Camp Adair. The first clearance occurred between 8 August to 16 October 1944, by the 1948 SCU-NSC Dud Searching Detachment under the Ninth Service Command dedudded Camp Adair. This detachment found 1,397 duds on the artillery ranges.

The 9800th TSU-CE Detachment Number 14, Engineer Bomb and Shell Disposal Team, conducted the second inspection of Camp Adair during 17 October through 1 November 1946.

The 9800th TSU-CE Detachment destroyed the following duds:

Qty.	Ordnance Type
2	155mm Shells, Semifixed, HE
4	105mm Shells, Semifixed, HE
1	81mm Mortar containing HE
3	60mm Mortars containing HE
3	A.T. Rockets containing HE
2	Hand Grenades containing HE
5	M1A1 Mines, practice
2	37mm Shots
50 (App.)	2.36-inch AT Rockets, Practice

This inspection team made several recommendations regarding Camp Adair. First, they felt that no further dedudding activities were needed. Second, they expected that unexploded shells would be found from time to time and they should be destroyed by the District Engineers Office on a periodic basis depending on the number of duds reported. Third Tract A-38 and the southern portion of Tract A-27 lie in the center of the main artillery target area, where a large density of shell holes were located should be restricted to grazing only. Another area known as the Lewisville Cemetery, Tract A-63 had a high concentration of shell firing and should be restricted to grazing only. Other recommendations included placing two large signs on Highway 99 reminding people that duds may exist and should not be disturbed but reported to the District Engineer.

On 22 August 1951, the State of Oregon Military Department was informed of a fuzed 81mm mortar that was found near Camp Adair. A demolition team from Fort Lewis dispatched to the area, exploded the mortar, and picked up several other duds found in the same area. These duds were reported to be harmless, practice shells.

On 11 June 1986, one 81mm white phosphorous mortar was unearthed by a farmer's plow near Monmouth, Oregon. The mortar burned after the plow tore it apart. An Army ordnance detachment from Vancouver Barracks blew up the detonator but did not have the manpower to sweep the area for additional potential hazards. Arrangements were made for Oregon National Guard personnel to sweep the farmer's field using metal detectors. The twelve-person National Guard squad from the 1249th Engineer Battalion, Company C swept the field. After six hours of searching no further ordnance was discovered. The Oregon National Guard unit declared the farm field safe from military explosives.

2.3 REAL ESTATE

2.3.1 Eligibility

2.3.1.1 Camp Adair Property Acquisition and Disposal

The former **Camp Adair** consisted of 56,815.17[1] acres of land north of Corvallis, Oregon. Real Estate Directives Nos. 1385, 1042, 1042A, 612, 612A, 612C, and 612D requested the acquisition of the lands needed for Camp Adair. The majority of lands for Camp Adair was acquired in fee between 1942 and 1945 and was used to house and train four Army Infantry Divisions (see Figure 2-3). A small portion of the lands was covered by licenses and easements.

Camp Adair was carved out of a long established, highly developed agricultural community. Settlement followed the Donation Act of 1850. The bulk of the disposal area was in farms that were occupied in many instances by third generation farmers prior to acquisition. These varied from comparatively small berry farms, orchards, and vineyards to larger general purpose and livestock farms. A significant portion of the land is mountainous and was forested. At the time of acquisition, approximately 59 percent was cropped, 21 percent was used for grazing, and 20 percent was in forest. The number of tracts acquired in the surplus was 387. The size of the tracts varied from less than an acre up to nearly 900 acres.

On 17 April 1946, the Camp Adair land and buildings were determined excess by the War Department and reported to the War Assets Administration (WAA) for disposal under the Surplus Property Act. The WAA assumed accountability for all of the lands at the site and on 15 May 1946, transferred the property, less the Cantonment Area, to the Department of Agriculture for sale by the Federal Land Bank as agricultural land. The archive search was not able to locate detailed and complete records regarding the sale and transfer of these lands by the WAA. Most of these lands are now privately owned, agricultural and forest lands or were transferred to the State of Oregon for state forestry and for fish and wildlife purposes.

The General Services Administration (GSA) later assumed accountability for 736 acres not disposed of by the WAA. The GSA by quitclaim deeded 124 acres to Plywood Products Corporation, 85 acres to the State of Oregon and transferred 527 acres to the Oregon National Guard.

[1] Total acreage of Camp Adair varies by listing agency and date of listing. This ASR will use 56,815.17 acres as the total Camp Adair acreage (56,621.11 fee and 194.06 acres "other"). Total acreage is also listed as 56,780.88 in US Army Camp Adair Project Ownership Map 1948 (Sheets 1 through 8).

The acreage withdrawn for the State of Oregon Army National Guard is listed differently in two separate documents. One document indicates that the withdrawal from surplus of a 560-acre tract comprising the rifle range at Camp Adair and makes it available to the State on a revocable license. A second document lists this acreage as 527 acres. This ASR will use the latter acreage as the amount of land withdrawn for the Oregon National Guard. The 527-acre tract is still under the jurisdiction of the State and is operated as a rifle range/training area.

2.3.1.2 Adair Air Force Station Acquisition and Disposal

The **Adair Air Force Station** consisted of 587.51 acres of which 190.93 acres were formerly used by Camp Adair. Adair Air Force Station lands acquired during 1958 and 1959 were used as an Air Force radar information sorting facility, housing area, and a missile site. The majority of these lands were acquired in fee.

In 1970, the Adair Air Force Station lands were determined excess and reported to the GSA for disposal. GSA transferred 140 acres to the Department of Agriculture. They also transferred 326 acres to the Secretary of Health, Education and Welfare which quitclaim deeded 214 acres to the US International University and 112 acres to the City of Albany, Oregon. GSA also quitclaim deeded 62 acres to A. G. Proctor Company and 60 acres to Wells Property, Inc. A detailed accounting of the acreage and other real property excessed by the Air Force is listed in the referenced Air Force documents dated 13 August 1970.

A total of 56,815.17 acres was acquired by various real estate instruments for Camp Adair/Adair Air Force Station. All acquired acreage has been disposed. This real estate figure concurs with the acreage number stated in the INPR.

Based on a review of available real estate documents, the War Department/US Government released Camp Adair / Adair Air Force Station with no restrictive covenants or land use restrictions.

2.3.2 Potential DOD Ownership

The archive search did not identify any additional areas of undocumented military ownership or land use associated with Camp Adair / Adair Air Force Station.

2.3.3 Significant Past Ownership Other Than DOD

This investigation did not reveal any significant past ownership of Camp Adair / Adair Air Force Station (other than the DOD) with relationship to OE or CWM.

2.3.4 Present Ownership

Records reviewed indicate the current property owners include the following:

a. Private agricultural and other land owners
b. Private forest lands
c. State of Oregon - Department of Fish and Wildlife (ODFW)
d. Siuslaw National Forest – US Department of Agriculture (USDA-FS)
e. Plywood Products Corporation
f. United States International University
g. City of Albany, Oregon
h. Wells Property, Incorporated
i. A.G. Proctor Company
j. Oregon National Guard Bureau

2.4 SITE INSPECTION

2.4.1 Authority and Scope

On 29-31 May 2001, personnel from the St. Louis District, Corps of Engineers (CEMVS-ED-P) traveled to Portland, Oregon to inspect Camp Adair / Adair Air Force Station as part of the DERP-FUDS archive search report process. The site inspection was conducted by the following Corps of Engineers personnel:

Mr. Ed Valdez, Project Manager
Mr. Hank Counts, Safety Specialist
Ms. Donna Zoeller, Engineering Technician

Routes were pre-planned that would enable the inspection of the main impact areas and as much of the 56, 815.67 acres of Camp Adair as possible. The routes taken and the location of photographs taken during the site inspection are shown on Figure 2-4. The photographs are contained in the ASR, Appendix I.

2.4.2 Site Inspection Synopsis

The site inspection began at 0800 hours on 29 May 2001 with a brief meeting with Mr. Eric Lamfers, Oregon State University Forestry Service. Our inspection plan was discussed and clearance onto the property was confirmed. Mr. Lamfers showed us maps of the area within their control and a box of OE debris collected on the former Camp Adair property over the past years. Arrangements were made to meet up with him later that day to visit areas where concrete structures had been observed.

The Camp Adair training area is an extremely large that is primarily located to the west of State Highway 99, with the exception of the cantonment area. Accordingly, the inspection route was selected to enable the ASR team to inspect as large an area as possible and to ensure that predetermined critical ranges and impact areas were visited.

The ASR team commenced the inspection on Route A, beginning at the entrance to Camp Adair (photo # 1). The team then proceeded through the cantonment area and looked for any evidence of OE debris. The airfield on the northern portion of the cantonment (photo # 2) was visited. The shape of the airfield is still discernable, however no remnants of military buildings was observed. The inspection continued throughout the remnants of the cantonment area. Other than the roads and some concrete blocks that served as the foundations for the buildings, nothing else remained. During the kickoff interview, Mr. Lamfers, who had been working at Camp Adair for 25 years, revealed that only one incident had occurred in which OE debris had been found in the cantonment area. A

mortar round was found in the vicinity of N 44° 41' 43", W 123° 12' 32" while two ponds were being dug in the south central portion of the cantonment area (photo # 3). He could not be remembered if the mortar round were live or not. However, he did recall that the round had been disposed of by the Oregon State Police Bomb Disposal Unit. The inspection continued in the southern area of the cantonment where suspected training areas were located (photo # 4). No ordnance or chemical warfare material contamination or debris was found during this portion of the inspection.

The inspection shifted to the southern portion of the cantonment that was part of Adair Air Force Station. Much of the Air Force buildings and facilities were still intact and were being beneficially used by the local residents. The former Air Force headquarters is now being used as an elementary school (photo # 5). The command center is currently being used as a carpenter training facility (photo # 6). The remainder of the former Air Force Station has been converted to residential or community properties. The only known potential OE hazard in this area was the former Air Force skeet range. This area was inspected. The skeet building No. 580 no longer existed and no visible OE hazards were observed.

The inspection then proceeded back to an area north of the cantonment where Range Nos. 125-127 (hand grenade courts) were located. This was also the area of a proposed "Live" hand grenade court. This area was swampy and inaccessible (photo #7). No remnants of the hand grenade courts existed and no OE debris contamination was found.

The inspection then proceeded west of State Road 99 to the Range/Magazine area located at coordinates N44° 41' 00", W123° 13' 55". This area was the main ordnance and explosives storage area for Camp Adair. The inspection team visually located eight of the twenty magazines listed on historical documents. These metal igloo magazines are still intact and are being utilized for storage by the owner of the property (photo #'s 8 and 9). No military artifacts or OE debris or contamination was found.

The team then proceeded to the southwest to the vicinity of Ranges Nos. 60 and 80A/B (photo #'s10 and 11). These ranges were mortar ranges and fired into the facing hillside shown on the photographs. No evidence of the firing point or debris was found and the impact area has been de-forested and is being farmed. Some of the former impact area is being utilized as Christmas tree farms. Escorted by Mr. Lamfers (University of Oregon Forestry Service), the ASR team inspected the former impact area. Two observation posts were discovered at coordinates N44° 40' 51", W123° 16' 14" (photo #s 12 and 13). The observation posts were used to spot and control mortar rounds fired into the impact area. This area is currently heavily trafficked by cattle. This area was extensively walked over by the inspection team. No OE debris or hazards was found in this area. However, the wooded areas that made up portions of the impact area was not thoroughly

inspected. A determination as to the extent of OE potential in the wooded area could not be made. Upon exiting the area of the observation posts, Range Nos. 65, 66, and 67 were inspected (photo #14). The impact area is heavily forested. A physical examination of this area was not conducted.

The next area inspected was the Camp Adair Known Distance Rifle Ranges (Range Nos. 1 - 4). The three southern rifle ranges have been developed into home sites (photo # 15). Homes have been built randomly through the area. The inspection team walked from the firing points to the impact berms that are still visible. No small arms debris or hazards were found. The northern most rifle range, KD Rifle Range No. 4 is still an active rifle range bring utilized by the Oregon National Guard (photo # 16). This active rifle range is completely enclosed by an 8-foot chain link fence and therefore was not inspected.

The team then reversed its route and headed south towards the ranges at the north slope of Coffin Butte (photo # 17). This area was utilized by the Army as 1000-inch anti-tank ranges. This area has been extensively developed with homes built on either the firing points or impact areas. No evidence of the ranges exists today. However, at a home on the eastern area of Coffin Butte, Mr. Breniman directed us to an area where he had found a 2.36" rocket. He did not know if it was a live or practice round, but did relate to us that it had been turned over to the Oregon State Police Disposal Unit. He also related that the soil at the Coffin Butte area was sifted for OE debris prior to being turned over to the residents. The inspection team found no evidence of OE debris or hazards in the Coffin Butte area. Upon exiting this area, the inspection team inspected the parade field where an anti-tank rocket was found. The field, which measured 4,675 feet x 1,200 feet, was a level field currently under grass (photo # 18). This area served as the Army's main parade field for Camp Adair. No OE hazards or debris was found in this area.

Upon completion of inspecting the Coffin Butte area, the team headed northwest up Portland Road towards the impact areas for Ranges Nos. 70 and 160. The team walked the impact area of the two ranges and discovered two lookout bunkers (photo # 19). Fescue grass is currently planted in this area. The area north of the bunkers, beyond the tree line, is also an impact area for Range No. 160. This area contains Christmas tree farms (photo # 20). No other OE debris or hazards was discovered in this area.

The team continued north along the road and viewed the impact area of Range No. 75 (photo # 21). The impact areas to the west are tree farms at various stages of harvest. North of this Range, were the firing points of the Range Nos. 86/86a mortar complex and the Range No. 79A. The firing points for the complexes are currently under fescue grass (photo #'s 22 and 23). No physical evidence of any remnants for the firing points were discovered by the inspection team. The impact areas for these mortars ranges were the

hill mass northeast of the firing points (Photo #24). This area today is either cultivated with fescue grasses, tree-farmed, or clear-cut.

After completing an inspection of the ranges in the northwest corner of the training area (Ranges Nos. 79, 84, and 89), the inspection team headed east along a major paved highway (Elkins Road). This road transected the major impact area of the majority of the mortar and artillery firing ranges located in the north sector of Camp Adair where numerous 105mm and 155mm duds have been found. The centroid of this impact area, which is bisected by a paved two-lane road, is now active farmland with homes, grazing cattle, and equipment storage (photo #'s 25 and 26). This area is being beneficially used for agricultural purposes. A visual inspection of the area did not uncover any OE hazards or debris.

Continuing east along Elkins Road, the inspection team attempted to locate the bombing targets utilized by the Navy/Marine Corps operating out of Corvallis Airfield. The northern bombing target was easily identifiable on 1944 aerial photographs at coordinates N44° 48' 36", W123° 15' 00". The area shows no trace of the northern bomb target as the land has been repeatedly plowed and filled and is currently a fully operational farm with numerous associated buildings and residences (photo # 27). An interview with one of the residents indicated that in fact numerous bomb craters did exist but had been filled in by the residents to make the lands usable. Any discovered bomb debris or fragments were hauled off. The long-time resident who provided this information was not aware of any incidents related to OE hazards.

The team then drove south along Highway 99 until the southern bombing target area was reached. In the historical aerial photograph, the southern bombing target, located in the vicinity of coordinates N44° 45' 36", W123° 15' 00" was clearly visible and marked with numerous bomb craters. Today, this area showed no evidence of the bombing target, or the craters as the area has been repeatedly plowed and filled (photo # 28). The area is totally cultivated with multiple crops and associated farm buildings. No evidence of the target or OE debris was found. This concluded the first day of inspection.

On 30 May 2001, a second route was taken by the inspection team (Route B) that concentrated on the central firing and impact area of Camp Adair. The team headed west from highway 99, along Suver Road where numerous mortar ranges and hand grenade courts were located. The team spoke with several landowners. The first, Mr. Kennel, a thirty year resident, stated they had found several duds on the 3,000 acres that he managed. Much of his land, a portion of which had been developed into a large pond, is located in the impact areas of mortar Ranges Nos. 76 and 83. The impact area is now being tilled with using 8-10-inch plows to grow Fescue and wheat.

Mr. Kennel then took us to an area where a 60mm round was discovered hanging on a fence (photo #'s 30 and 31). This round, along with a burn pile, were located at coordinates N44° 45' 45", W123° 15' 05". The round was determined to be a dud 60mm HE round. The Oregon State Police Bomb Disposal Unit was notified. The Disposal Unit responded and detonated the 60mm round (Photo #'s 32 and 33). Mr. Kennel stated that the owner of the property had collected several 81mm mortar rounds over the years and had burned them in a burn pile. The inspection team viewed the burn pile and noted that seven 81mm round were in fact burned and that the rounds had probably low order detonated. Mr. Kennel also gave us the name of another homeowner who also had found several duds and training debris over the past years.

The inspection team then went west on Suver Road to meet with the next farm owner who gave us locations of where he had found several duds in the past. He then took us to an area where he had discovered concrete structures (photo #'s 34 and 35), possible bunkers from the Fortified Training Area (Range No. 76). Several large craters were also found in this area (photo # 36). No other target or OE debris was discovered. However, this area is heavily treed or covered by high grass making a detailed visual inspection difficult. The area of the former "Nazi Village", Range No. 151, was also located and inspected. No village debris or OE hazards were found (Photo #37). Two former hand grenade courts along Suver Road were also inspected. No remnants or the courts or OE hazards was found (Photo #38).

The field combat ranges (Ranges Nos. 80-89) were inspected from along Highway 99. All firing points and impact areas are being beneficially utilized for agricultural use and/or orchards (Photo #'s 39 and 40). A windshield inspection of these impact areas did not uncover debris or OE hazards. This completed the ASR inspection of Camp Adair. Upon departing the camp area, the team visited the Benton County Museum where many pertinent Camp Adair artifacts and information was found (Photo #'s 41-44). The team then proceeded to return to base.

2.4.3 Current Site Characterization

Today, the area of the former Camp Adair west of Highway 99 consists mainly of farmland with the owners residences, pastures, the University of Oregon forestry land, and several new homes being built in the vicinity of the rifle ranges. The cantonment area east of the highway has been developed into residential areas and the Adair Village. Areas of the cantonment not populated have been left vacant and are managed by the State of Oregon or the Department of Agriculture. Except for KD Rifle Range No. 4 that is surrounded by a chain link fence and gated, all areas of the former Camp Adair is accessible to the public.

The ASR team did not uncover additional documents or hear statements from the local residents that declared any lands of the former Camp Adair / Adair Air Force Station as unusable because of OE/CWM hazards or other military debris.

2.5 CONFIRMED ORDNANCE PRESENCE

2.5.1 Conventional Ordnance

The archive search and site inspection confirmed the use of conventional ordnance at Camp Adair / Adair Air Force Station. Table 2-1 lists the areas/ranges and ordnance items used within Camp Adair. Figure 2-5 groups these ranges and bombing targets into common use sections. From an analysis of the information listed in the Table and displayed in the Figure, a grouping of common use impact areas was made. This process enabled the ASR team to estimate the total acreage of potentially OE contaminated areas at 28,965 acres and the acreage of uncontaminated areas at 27,850 acres. Table 2-1 also lists by section, the estimated OE contaminated acreage.

Table 2-1 – Camp Adair Ordnance Usage

Impact Area Sections **	Range Number(s)	Ordnance Item(s)	Dud OE Found *
North Central (10,108ac.)	79, 87, 88, BT #1	Small arms, 37mm, 57mm, 105mm, 155mm, 100# and 300# bombs	Yes
North Western (1,472ac.)	89, 89C	Small arms, 37mm, 57mm, 105mm	Yes
Central (8,125ac.)	76, 83, 84, 85, 86, 90, 91, 129, 142, Grenade Courts (2), BT #2	Small arms, 60mm, 81mm, 105mm, 155mm, 100# and 300# bombs, grenades, 2.36-inch AT rockets, explosives, pyrotechnics, flame throwers	Yes
South Western (7,979ac.)	1, 2, 3, 4, 50, 60, 61, 62, 65, 66, 67, 70, 75, 80, 80B, 81, 140, 141, 160	Small arms, 37mm, 57mm, 75mm, 60mm, 81mm, 105mm, pyrotechnics	Yes
South Central (1,052ac.)	15, 20, 21, 22, 23, 25, 30, 31, 32, 33, 34, 35, 36, 37, 40, 41, 45, 46, 131, 132,	Small arms, 2.36-inch AT rocket, pyrotechnics, flame thrower, CWM	Yes (2.36-inch AT rocket only)
Cantonment (229ac.)	120, 121, 122, 125, 126, 127, Skeet Range	Practice grenades, shotgun shells (Air Force)	No

* Indicated on General Layout Maps 1944 and 1993, or found on 2001site visit.

** Estimate of potentially OE and/or CWM contaminated acreage.

2.5.2 Chemical Warfare Material

The archive search uncovered direct evidence that CWM was used and stored at the former Camp Adair by the Army. The CWM probably consisted of CAIS Gas Detonation Sets / CAIS Identification Sets / CAIS Decontamination Sets (standard Army item during this time period), toxic gas sets, one-gallon chemical land mines, and riot control agents (tear gas). The final disposition of the CWM is unknown. Additionally, decontamination demonstrations and training was conducted in areas contaminated by vesicant gas (mustard). Figure 2-5 displays the areas that were confirmed to have been used for CWM training or for storage. No evidence or indication of the disposal or on site burial of CWM at Camp Adair was uncovered.

The archive search did not uncover evidence that would indicate CWM usage or storage by the Air Force on the former Adair Air Force Station.

2.6 POTENTIAL ORDNANCE PRESENCE

2.6.1 Conventional Ordnance

The archive search and the site inspection confirmed the presence of a current OE hazard in the form of surface and subsurface dud mortar rounds and antitank rockets. The positions of the previously identified duds and the duds found during the ASR site inspection are shown on Figure 2-5.

Historical documents indicate that dedudding activities conducted by the Army was accomplished "as to make it reasonably safe for any use". The surface of Camp Adair was inspected and by visual means only. Additionally, the Army recommended that certain areas be restricted to grazing or timbering only. No evidence was found to suggest that subsurface screening for and/or removal of subsurface ordnance was conducted.

Any buried dud rounds could potentially be unearthed or excavated and become exposed to the public.

2.6.2 Chemical Warfare Material

An analysis of information gathered during the archive search identified areas of potential CWM hazard at the former Camp Adair. The ASR site inspection was limited to a visual, surface search of the former CWM storage and training areas. CWM contamination could exist beneath the surface of the CWM storage and training areas.

2.7 UNCONTAMINATED AREAS

An analysis of the information gathered during the archive search did identify areas within the 56,815 acres of the former Camp Adair / Adair Air Force Station as having no history or OE/CWM use and as having no significant OE/CWM hazard potential. Uncontaminated areas at Camp Adair is calculated at approximately 27,850 acres (56,815 Camp Adair total acreage minus 28,965 acres of live fire impact areas). These uncontaminated areas are shown in Figure 2-5 as the white outside of the color coded areas that were confirmed to have been used for live fire training and exercises.

2.8 SITE INFORMATION ANALYSIS

2.8.1 Conventional Ordnance Contamination

The archive search uncovered evidence that the Army and the Air Force stored and utilized conventional ordnance at Camp Adair / Adair Air Force Station for training purposes. The Army planned for over 191 numbered and non-numbered ranges and bombing targets in support of training for four triangular infantry divisions. The types of ordnance used on the ranges included small arms, artillery, mortars, grenades, antitank rockets, pyrotechnics, explosives, and demolition material. The Air Force built and trained on a skeet range in the cantonment area of Camp Adair.

Of the 56,815.67 acres acquired for Camp Adair, approximately 28,965 acres should be considered to be live munitions impact areas and approximately 27,850 acres can be considered as having no significant OE/CWM hazard potential (see Figure 2-5). Accordingly, Camp Adair can be segregated into seven sections, each individually identified by the absence of or type of ordnance and explosives used. Each section can be assessed separately, assigned an individualized OE severity and hazard potential, and assigned a different, commensurate level of remediation.

Excluding small arms munitions, it is estimated that over 265,000 rounds of medium/large caliber munitions were fired at Camp Adair, primarily in the mortar and artillery impact areas north of Suver Road. Also, both practice and live bombs (up to 500-pounds) were dropped on the north central artillery impact areas by Army Air Force and Navy/Marine Corps units conducting training missions at Camp Adair. Applying a conservative 2% dud rate, approximately 5,300 of the medium/large caliber rounds fired at Camp Adair could have been duds.

Historical documents discussed and identify the locations of past discoveries of dud munitions. The ASR team found physical evidence of a current ordnance hazard at Camp Adair, a dud 60mm mortar round and seven burned 81mm mortar rounds in the Range

No. 76 area north or Suver Road. Both the 60mm and 81mm rounds were within a mile of farm homes. Except for the antitank rockets, the duds were found in the central and north central mortar and artillery impact areas where the major range fans intersect.

The site INPR stated that only two incidents of OE hazards at Camp Adair have been documented. It is possible that these two OE incidents may have been the only two that were reported. During interviews with residents, the ASR team learned of two additional locations where duds were found but not reported. These locations were different from the historical locations of reported duds and also from the location of the duds found by the inspection team. It is possible that many discoveries of dud munitions are not being reported to the proper authorities.

KD Rifle Range No. 4 was leased to the Oregon National Guard Bureau and is currently an active training facility. Rifle Range No. 4 was used by the Army and is eligible for remediation under DERP-FUDS. The rifle range was fenced and was not inspected by the ASR team. Further action by USAESCH may be required once the range is returned to the DOD.

Other than the use of practice grenades, no evidence of the use of ordnance or explosive by the Army in the cantonment area was found. The Air Force built and trained at a skeet range in the cantonment area. The skeet range was removed and no remnants or OE contamination was found in the cantonment area by the inspection team. Accordingly, the potential for OE hazards at the cantonment area of Camp Adair is considered negligible.

The majority of the former Camp Adair is currently being used for forestry/logging operations, farmlands, or wildlife refuge. Many homes and small enterprises have been built in the cantonment area and several dozens have been built directly throughout the former impact areas. No historical or current evidence of any lands being removed from beneficial use due to OE hazards was found.

2.8.2 Chemical Warfare Material Contamination

The archive search uncovered historical documents and photographs that indicate the storage and use chemical warfare materials by the Army at Camp Adair. Evidence indicates that routine CWM instructional courses along with practical exercises prepared soldiers for potential battlefield situations. Training included gas chamber exercises, gas identification, decontamination procedures, instruction in handling incendiaries, and full-scale mock battle exercises in a simulated chemical warfare environment.

CWM facilities consisted of four gas chambers in two gas training ranges, a gas training/decontamination area, and a CWM storage area. Camp Adair Range Nos. 180 and 181 were used for gas chamber training and Range No. 182 was used for CWM recognition and decontamination exercises. CWS Ammunition Igloos #1 and #13 and CWS Ammunition Houses #1 and #2 were used for storage of CWM.

The CWM probably consisted of CAIS Gas Detonation Sets / CAIS Identification Sets / CAIS Decontamination Sets, one-gallon chemical land mines, and riot control agents (tear gas). Decontamination demonstrations and training by the Army was conducted in areas contaminated by vesicant gas (mustard). The final disposition of the CWM remains unknown.

Aerial photography analysis and the site inspection did not locate any distinct signs of on-site burial.

The inspection team did not find any remnants of the CWM facilities or surface indications of potential CWM hazards at Camp Adair. However, the inspection team's search was limited to a visual search of the surface of the CWM areas.

The archive search did not uncover any evidence that CWM training or storage was conducted by the Air Force on any portion of the former Adair Air Force Station.

NO.	RANGE INDEX
1	KNOWN DIST. RIFLE RANGE
2	KNOWN DIST. RIFLE RANGE
3	KNOWN DIST. RIFLE RANGE
4	KNOWN DIST. RIFLE RANGE
11	1000" PISTOL RANGE
15	1000" PISTOL RANGE
20	1000" MACHINE GUN RANGE
21	1000" MACHINE GUN RANGE
22	1000" MACHINE GUN RANGE
23	1000" MACHINE GUN RANGE
30	1000" LANDSCAPE RANGE
31	1000" LANDSCAPE RANGE
32	1000" LANDSCAPE RANGE
33	1000" LANDSCAPE RANGE
34	1000" LANDSCAPE RANGE
35	1000" LANDSCAPE RANGE
36	1000" LANDSCAPE RANGE
37	1000" LANDSCAPE RANGE
40	1000" ANTI-TANK RANGE
41	1000" ANTI-TANK RANGE
45	1000" ANTI-TANK RANGE
46	1000" ANTI-TANK RANGE
50	THOMPSON SUB-MACH. GUN
50A	THOMPSON SUB-MACH. GUN
51	FIELD COMBAT RANGE (THOMPSON SUB-MACH. GUN)
60	MINI. ANTI-AIRCRAFT RANGE
61	MINI. ANTI-AIRCRAFT RANGE
62	MINI. ANTI-AIRCRAFT RANGE
65	MINI. ANTI-AIRCRAFT RANGE
66	MINI. ANTI-AIRCRAFT RANGE
67	MINI. ANTI-AIRCRAFT RANGE
70	ANTI-AIRCRAFT RANGES
71	ANTI-AIRCRAFT RANGES
72	PROPOSED MOVING TARGET RANGES
73	PROPOSED MOVING TARGET RANGES
75	FIELD COMBAT RANGE
76	FORTIFIED TRAINING AREA
79A	MOVING TARGET RANGE
79B	MOVING TARGET RANGE
80	FIELD COMBAT RANGE (PITS)
80A	FIELD COMBAT RANGE
80B	FIELD COMBAT RANGE (PIT)
81	FIELD COMBAT RANGE (PITS)
83	FIELD COMBAT RANGE (PIT)
84	FIELD COMBAT RANGE
84A	FIELD COMBAT RANGE
85	FIELD COMBAT RANGE (PITS)
86	FIELD COMBAT RANGE
86A	FIELD COMBAT RANGE
87	FIELD COMBAT RANGE (PIT)
87A	FIELD COMBAT RANGE (PITS)
87B	FIELD COMBAT RANGE
88	FIELD COMBAT RANGE (PIT)
89	FIELD COMBAT RANGE
89B	FIELD COMBAT RANGE
89C	FIELD COMBAT RANGE
90	MORTAR RANGE
91	MORTAR RANGE
110	BAYONET COURSE
111	BAYONET COURSE
112	BAYONET COURSE
113	BAYONET COURSE
114	BAYONET COURSE
115	BAYONET COURSE
116	BAYONET COURSE
117	BAYONET COURSE
120	PRACTICE GRENADE COURT
121	PRACTICE GRENADE COURT
122	PRACTICE GRENADE COURT
123	PRACTICE GRENADE COURT
124	PRACTICE GRENADE COURT
125	PRACTICE GRENADE COURT
126	PRACTICE GRENADE COURT
127	PRACTICE GRENADE COURT
129	LIVE HAND GRENADE COURT
130	OBSTACLE COURSE
131	OBSTACLE COURSE
132	OBSTACLE COURSE
133	OBSTACLE COURSE
134	OBSTACLE COURSE
135	OBSTACLE COURSE
136	OBSTACLE COURSE
137	OBSTACLE COURSE
138	OBSTACLE COURSE
139	OBSTACLE COURSE
140	OBSTACLE COURSE
141	INFILTRATION RANGE
142	INFILTRATION RANGE
143	INFILTRATION RANGE
150	NAZI VILLAGE
151	NAZI VILLAGE
160	TRANSITION COURSE
170	CLOSE COMBAT COURSE
171	CLOSE COMBAT COURSE
172	CLOSE COMBAT COURSE
180	GAS CHAMBER
181	GAS CHAMBER
182	GAS AREA
190	EMBARKING DEVICE
191	EMBARKING DEVICE

LEGEND

SITE BOUNDARY

Ⓓ LOCATION OF PREVIOUSLY LOCATED DUDS

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
HISTORICAL RANGE MAP

PROJ. DATE: SEPT 2001	DATE OF MAP: 1-21-44	FIGURE 2-1
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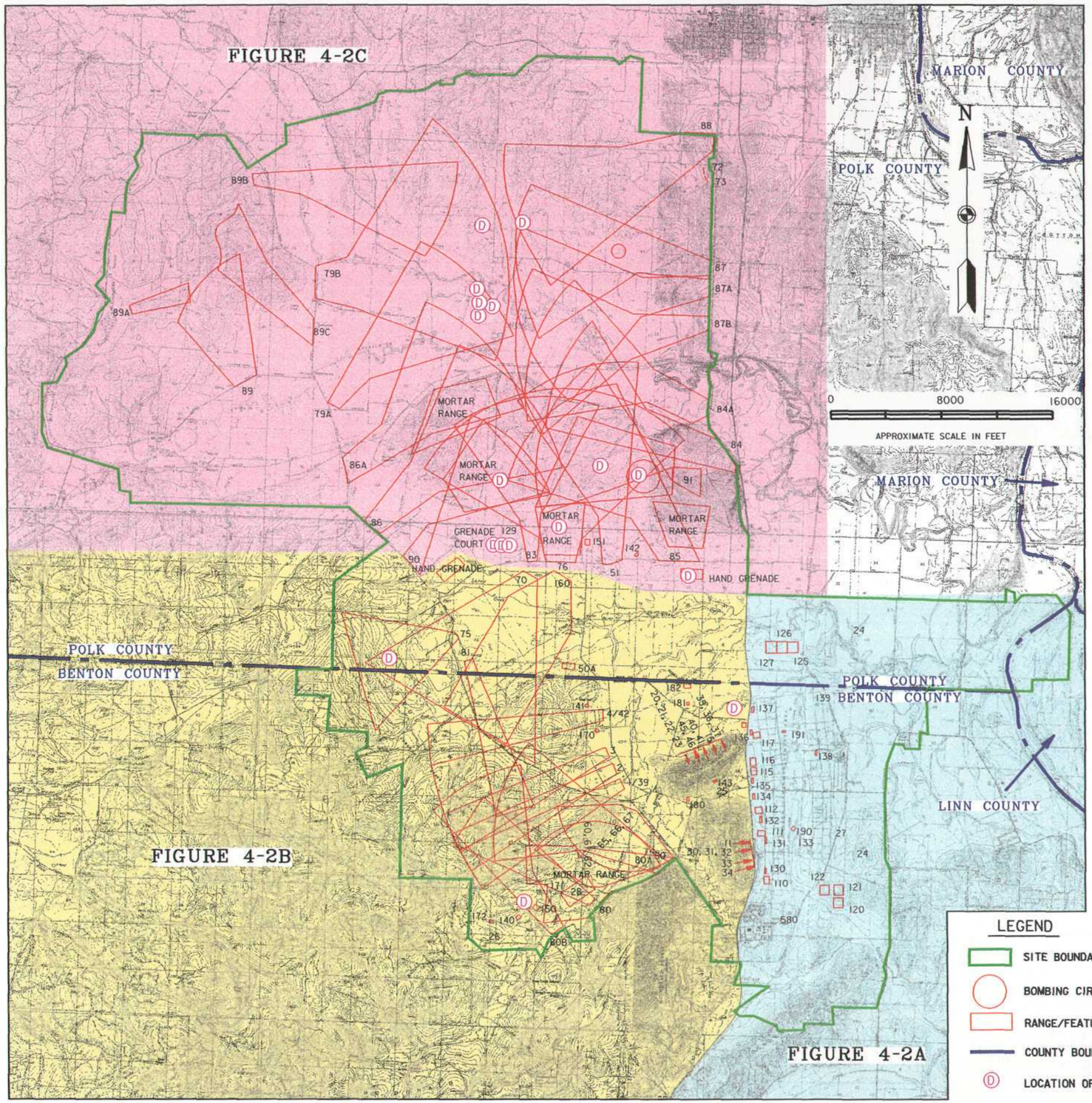


LEGEND

- SITE BOUNDARY
- BOMBING CIRCLE
- RANGE/FEATURE LOCATION
- COUNTY BOUNDARY
- (D) LOCATION OF PREVIOUSLY LOCATED DUDS

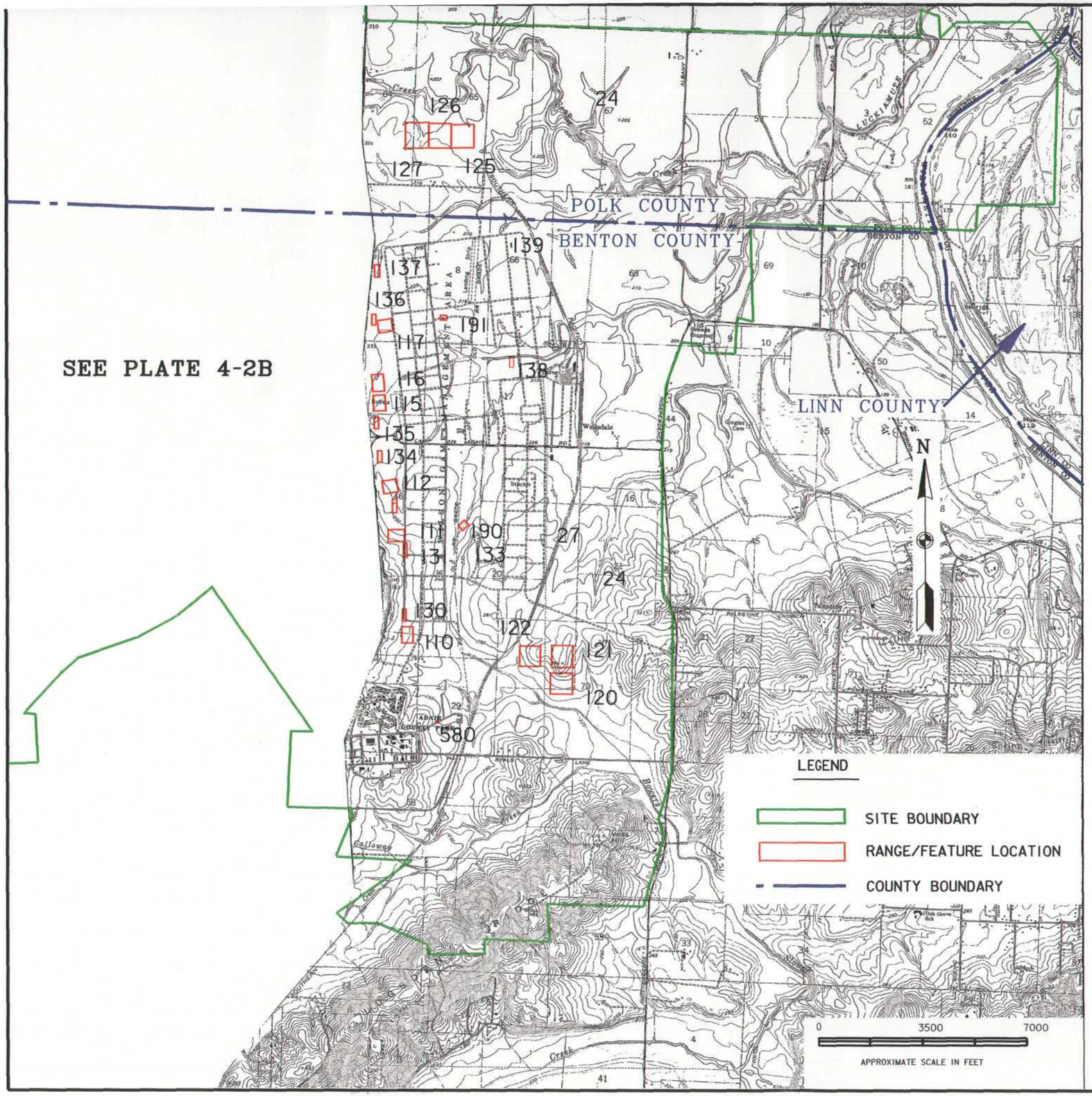
RANGE INDEX

1	KNOWN DISTANCE RIFLE RANGE
2	KNOWN DISTANCE RIFLE RANGE
3	KNOWN DISTANCE RIFLE RANGE
4	KNOWN DISTANCE RIFLE RANGE
11	1000' PISTOL RANGE
15	1000' PISTOL RANGE
20	1000' MACHINE GUN RANGE
21	1000' MACHINE GUN RANGE
22	1000' MACHINE GUN RANGE
23	1000' MACHINE GUN RANGE
24	PROPOSED GRENADE COURT
25	FLAME THROWER AREA
26	PROPOSED BAYONET ASSAULT COURSE
27	OBSTACLE COURSE
28	PROPOSED CLOSE COMBAT COURSE
30	1000' LANDSCAPE RANGE
31	1000' LANDSCAPE RANGE
32	1000' LANDSCAPE RANGE
33	1000' LANDSCAPE RANGE
34	1000' LANDSCAPE RANGE
35	1000' LANDSCAPE RANGE
36	1000' LANDSCAPE RANGE
37	1000' LANDSCAPE RANGE
39	1000' ANTI TANK RANGE
40	1000' ANTI TANK RANGE
41	1000' ANTI TANK RANGE
42	1000' ANTI TANK RANGE
45	1000' ANTI TANK RANGE
46	1000' ANTI TANK RANGE
50	THOMPSON SUB MACHINE GUN RANGE
50A	THOMPSON SUB MACHINE GUN RANGE
51	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
60	MINI ANTI AIRCRAFT RANGE
61	MINI ANTI AIRCRAFT RANGE
62	MINI ANTI AIRCRAFT RANGE
65	MINI ANTI AIR CRAFT RANGE
66	MINI ANTI AIRCRAFT RANGE
67	MINI ANTI AIRCRAFT RANGE
70	ANTI AIRCRAFT RANGE
71	ANTI AIRCRAFT RANGE (COULD NOT LOCATE)
72	PROPOSED MOVING TARGET RANGES
73	PROPOSED MOVING TARGET RANGES
75	FIELD COMBAT RANGE
76	FORTIFIED TRAINING AREA
79A	MOVING TARGET RANGE
79B	MOVING TARGET RANGE
80	FIELD COMBAT RANGE (PITS)
80A	FIELD COMBAT RANGE (PITS)
80B	FIELD COMBAT (PITS)
81	FIELD COMBAT RANGE (PITS)
83	FIELD COMBAT RANGE
84	FIELD COMBAT RANGE (PITS)
84A	FIELD COMBAT RANGE
85	FIELD COMBAT RANGE (PITS)
86	FIELD COMBAT RANGE (PITS)
86A	FIELD COMBAT RANGE (PITS)
87	FIELD COMBAT RANGE (PITS)
87A	FIELD COMBAT RANGE (PITS)
87B	FIELD COMBAT RANGE (PITS)
88	FIELD COMBAT RANGE (PITS)
89	FIELD COMBAT RANGE (PITS)
89A	FIELD COMBAT RANGE
89B	FIELD COMBAT RANGE
89C	FIELD COMBAT RANGE
89D	FIELD COMBAT RANGE (COULD NOT LOCATE)
90	MORTAR RANGE
91	MORTAR RANGE
110	BAYONET COURSE
111	BAYONET COURSE
112	BAYONET COURSE
113	BAYONET COURSE (COULD NOT LOCATE)
114	BAYONET COURSE (COULD NOT LOCATE)
115	BAYONET COURSE
116	BAYONET COURSE
117	BAYONET COURSE
120	PRACTICE GRENADE COURSE
121	PRACTICE GRENADE COURSE
122	PRACTICE GRENADE COURSE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
125	PRACTICE GRENADE COURSE
126	PRACTICE GRENADE COURSE
127	PRACTICE GRENADE COURSE
129	LIVE HAND GRENADE COURSE
130	OBSTACLE COURSE
131	OBSTACLE COURSE
132	OBSTACLE COURSE
133	OBSTACLE COURSE
134	OBSTACLE COURSE
135	OBSTACLE COURSE
136	OBSTACLE COURSE
137	OBSTACLE COURSE
138	OBSTACLE COURSE
139	OBSTACLE COURSE
140	OBSTACLE COURSE
141	INFILTRATION RANGE
142	INFILTRATION RANGE
143	INFILTRATION RANGE
150	NAZI VILLAGE
151	NAZI VILLAGE
160	TRANSITION COURSE
170	CLOSE COMBAT COURSE
171	CLOSE COMBAT COURSE
172	CLOSE COMBAT COURSE
180	GAS CHAMBER
181	GAS CHAMBER
182	GAS AREA
190	EMBARKING DEVICE
191	EMBARKING DEVICE
580	SKEET RANGE

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
RANGE MAP

PROJ. DATE: SEPT 2001	DATE OF QUADS: 1974, 1984, & 1986	FIGURE 2-2
24-SEP-2001 14:19	t:\oew\oew2001\oregon\compadair\figure2-2.dgn	



RANGE INDEX

24	PROPOSED GRENADE COURT
27	OBSTACLE COUSE
110	BAYONET COURSE
111	BAYONET COURSE
112	BAYONET COURSE
113	BAYONET COURSE (COULD NOT LOCATE)
114	BAYONET COURSE (COULD NOT LOCATE)
115	BAYONET COURSE
116	BAYONET COURSE
117	BAYONET COURSE
120	PRACTICE GRENADE COURSE
121	PRACTICE GRENADE COURSE
122	PRACTICE GRENADE COURSE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
125	PRACTICE GRENADE COURSE
126	PRACTICE GRENADE COURSE
127	PRACTICE GRENADE COURSE
130	OBSTACLE COURSE
131	OBSTACLE COURSE
132	OBSTACLE COURSE
133	OBSTACLE COURSE
134	OBSTACLE COURSE
135	OBSTACLE COURSE
136	OBSTACLE COURSE
137	OBSTACLE COURSE
138	OBSTACLE COURSE
139	OBSTACLE COURSE
190	EMBARKING DEVICE
191	EMBARKING DEVICE
580	SKEET RANGE

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F100R002903
SOUTHEASTERN SECTION

PROJ. DATE: SEPT 2001	DATE OF QUAD: 1986	FIGURE 2-2A
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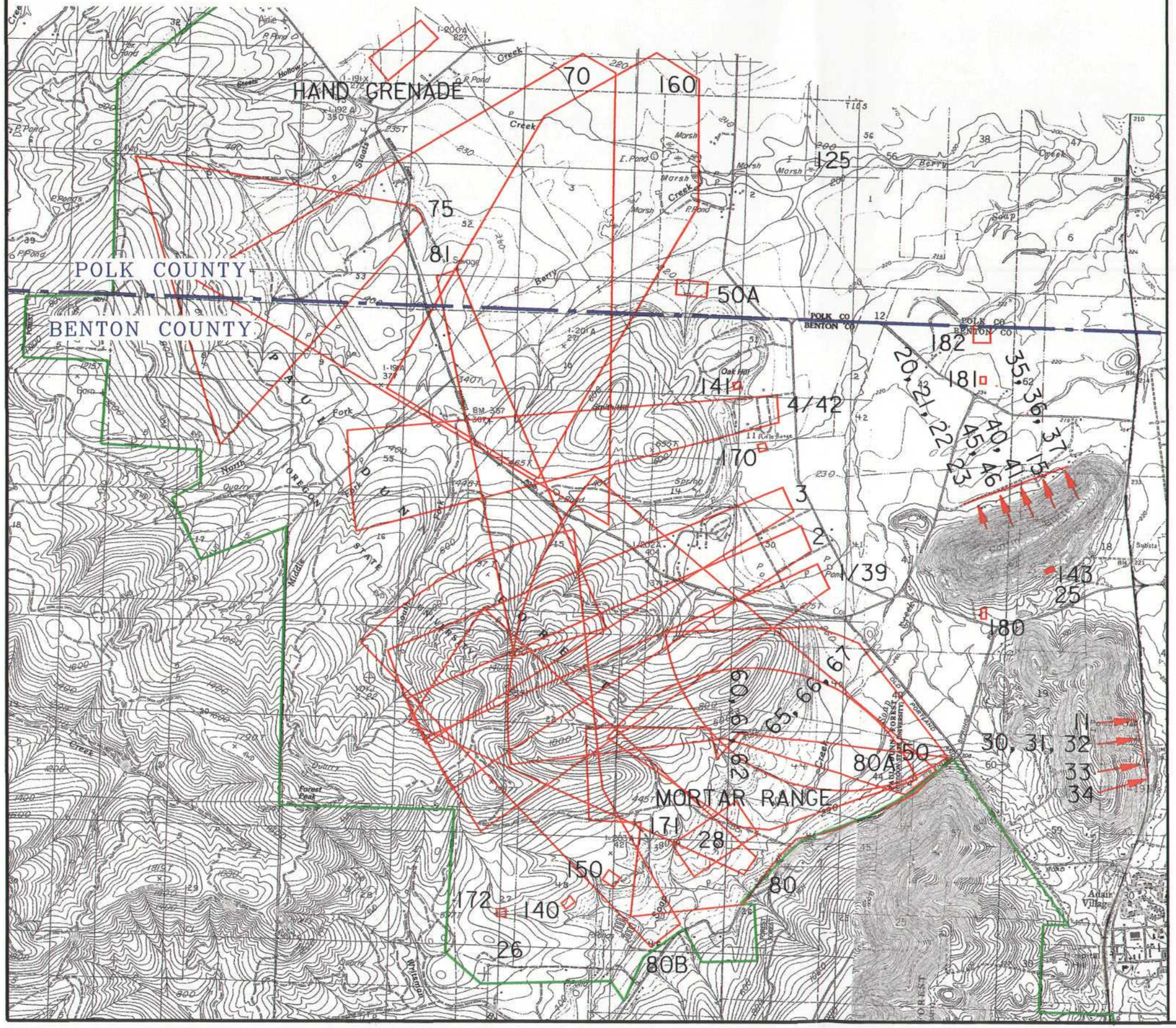
SEE FIGURE 2-2C



RANGE INDEX

1	KNOWN DISTANCE RIFLE RANGE	50	THOMPSON SUB MACHINE GUN RANGE
2	KNOWN DISTANCE RIFLE RANGE	50A	THOMPSON SUB MACHINE GUN RANGE
3	KNOWN DISTANCE RIFLE RANGE	60	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
4	KNOWN DISTANCE RIFLE RANGE	61	MINI ANTI AIRCRAFT RANGE
11	1000* PISTOL RANGE	62	MINI ANTI AIRCRAFT RANGE
15	1000* PISTOL RANGE	65	MINI ANTI AIRCRAFT RANGE
20	1000* MACHINE GUN RANGE	66	MINI ANTI AIR CRAFT RANGE
21	1000* MACHINE GUN RANGE	67	MINI ANTI AIRCRAFT RANGE
22	1000* MACHINE GUN RANGE	70	MINI ANTI AIRCRAFT RANGE
23	1000* MACHINE GUN RANGE	71	ANTI AIRCRAFT RANGE (COULD NOT LOCATE)
24	PROPOSED GRENADE COURT	75	ANTI AIRCRAFT RANGE
25	FLAME THROWER AREA	80	FIELD COMBAT RANGE
26	PROPOSED BAYONET ASSAULT COURSE	80A	FIELD COMBAT RANGE (PITS)
27	OBSTACLE COURSE	80B	FIELD COMBAT RANGE (PITS)
28	PROPOSED CLOSE COMBAT COURSE	81	FIELD COMBAT RANGE (PITS)
30	1000* LANDSCAPE RANGE	90	FIELD COMBAT RANGE (PITS)
31	1000* LANDSCAPE RANGE	140	MORTAR RANGE
32	1000* LANDSCAPE RANGE	141	OBSTACLE COURSE
33	1000* LANDSCAPE RANGE	143	INFILTRATION COURSE
34	1000* LANDSCAPE RANGE	150	NAZI VILLAGE
35	1000* LANDSCAPE RANGE	160	TR4ANSITION COURSE
36	1000* LANDSCAPE RANGE	170	CLOSE COMBAT COURSE
37	1000* LANDSCAPE RANGE	171	CLOSE COMBAT COURSE
39	1000* ANTI TANK RANGE	172	CLOSE COMBAT COURSE
40	1000* ANTI TANK RANGE	180	GAS CHAMBER
41	1000* ANTI TANK RANGE	181	GAS CHAMBER
42	1000* ANTI TANK RANGE	182	GAS CHAMBER AREA
45	1000* ANTI TANK RANGE		
46	1000* ANTI TANK RANGE		

LEGEND

- SITE LOCATION
- RANGE/FEATURE LOCATION
- COUNTY BOUNDARY

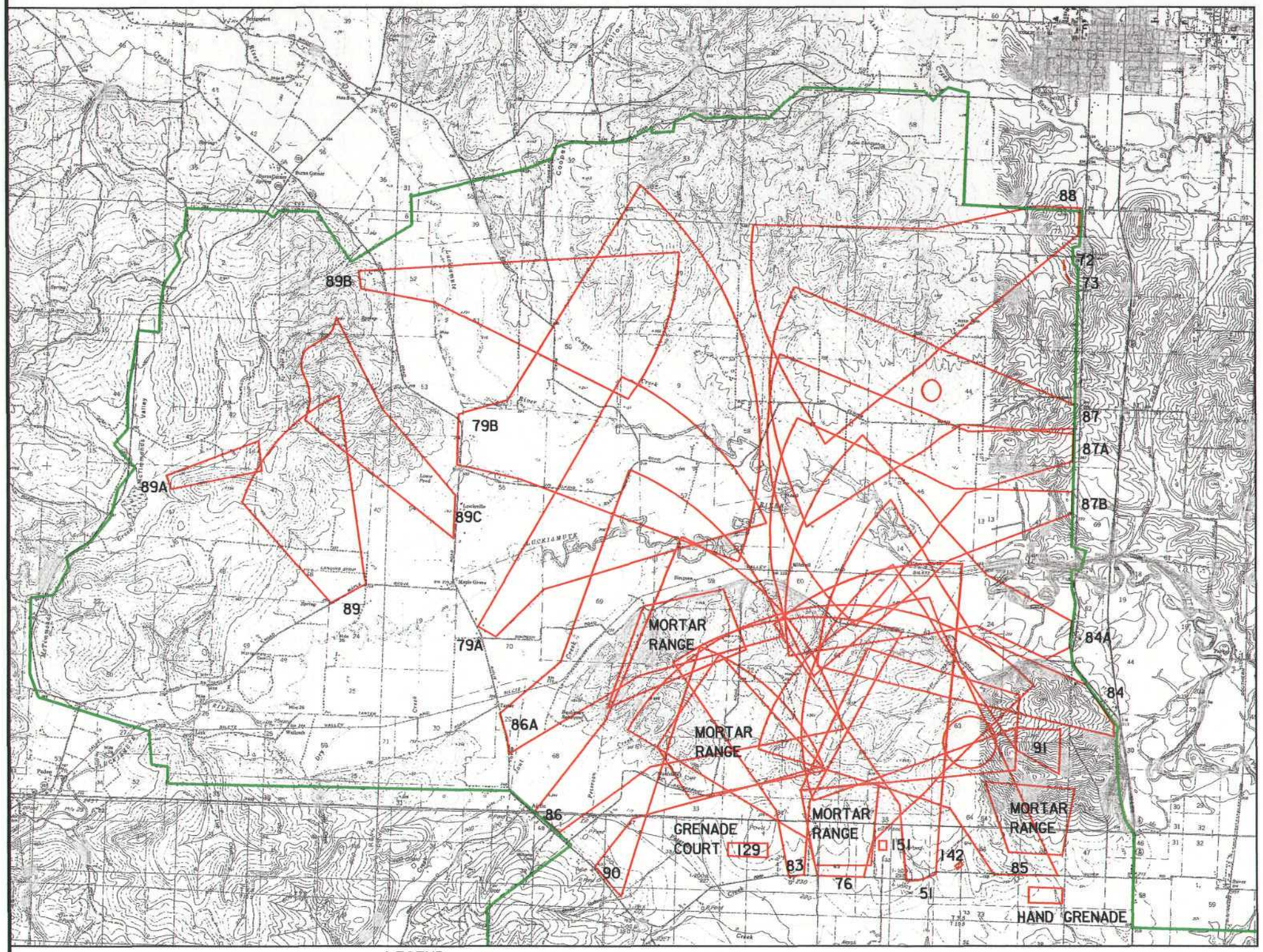
0 3200 6400

APPROXIMATE SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
SOUTHWESTERN SECTION

PROJ. DATE: SEPT 2001	DATE OF QUAD: 1984 & 1986	FIGURE
22-SEP-2001 10:53	t:\oew\oew2001\oregon\campadair\figure2-2b.dgn	2-2B



RANGE INDEX

51	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
72	PROPOSED MOVING TARGET RANGES
73	PROPOSED MOVING TARGET RANGES
76	FORTIFIED TRAINING AREA
79A	MOVING TARGET RANGE
79B	MOVING TARGET RANGE
83	FIELD COMBAT RANGE
84	FIELD COMBAT RANGE (PITS)
84A	FIELD COMBAT RANGE
85	FIELD COMBAT RANGE (PITS)
86A	FIELD COMBAT RANGE (PITS)
87	FIELD COMBAT RANGE (PITS)
87A	FIELD COMBAT RANGE (PITS)
87B	FIELD COMBAT RANGE (PITS)
88	FIELD COMBAT RANGE (PITS)
89	FIELD COMBAT RANGE (PITS)
89A	FIELD COMBAT RANGE
89B	FIELD COMBAT RANGE
89C	FIELD COMBAT RANGE
89D	FIELD COMBAT RANGE (COULD NOT LOCATE)
90	MORTAR RANGE
91	MORTAR RANGE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
* 129	LIVE HAND GRENADE COURSE
142	INFILTRATION RANGE
151	NAZI VILLAGE

LEGEND

- SITE BOUNDARY
- BOMBING CIRCLE
- RANGE/FEATURE LOCATION

0 5500 11000

APPROXIMATE SCALE IN FEET

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
NORTHERN SECTION

PROJ. DATE: SEPT 2001	DATE OF QUADS: 1974 & 1986	FIGURE 2-2C
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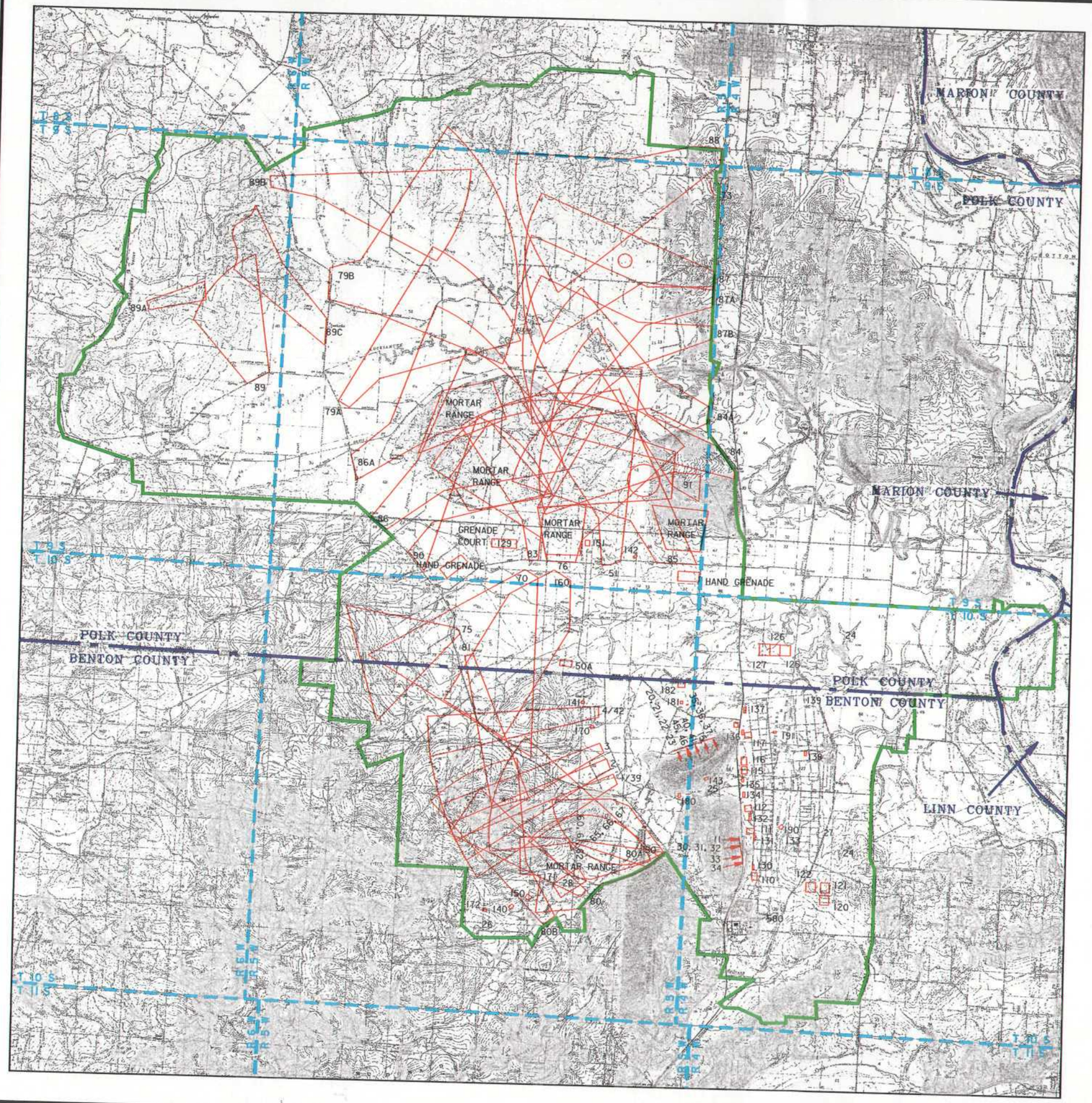

LEGEND

- SITE BOUNDARY
- RANGES
- BOMBING CIRCLE
- TOWNSHIP/RANGE LINE
- COUNTY BOUNDARY

0 8000 16000

APPROXIMATE SCALE IN FEET

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F100R002903
REAL ESTATE MAP

PROJ. DATE: SEPT 2001	QUADS: 1974, 1984, & 1986	FIGURE 2-3
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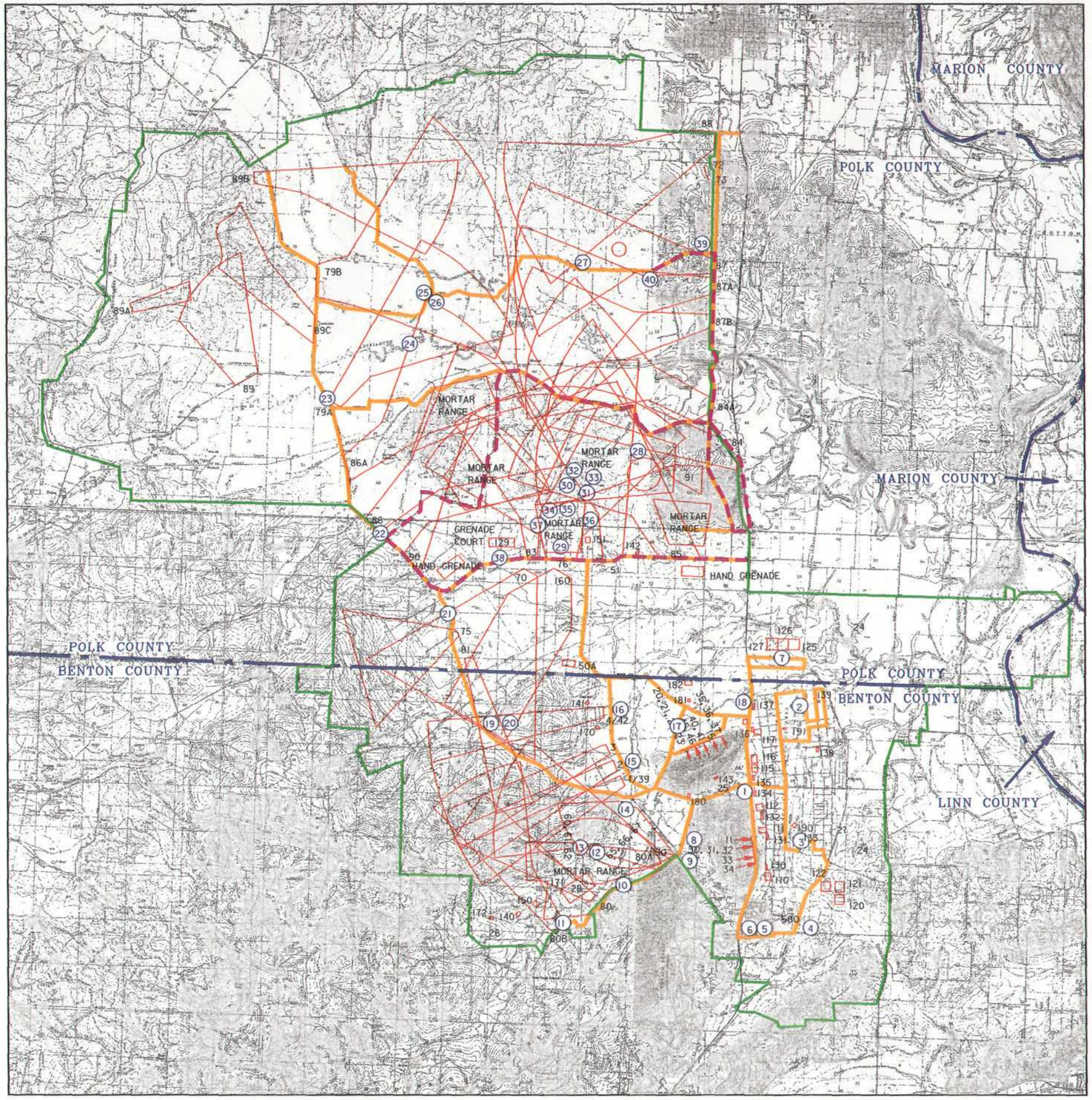

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
SITE INSPECTION & PHOTO LOCATION MAP

PROJ. DATE: SEPT 2001	DATE OF QUADS: 1974, 1984,& 1986	FIGURE 2-4
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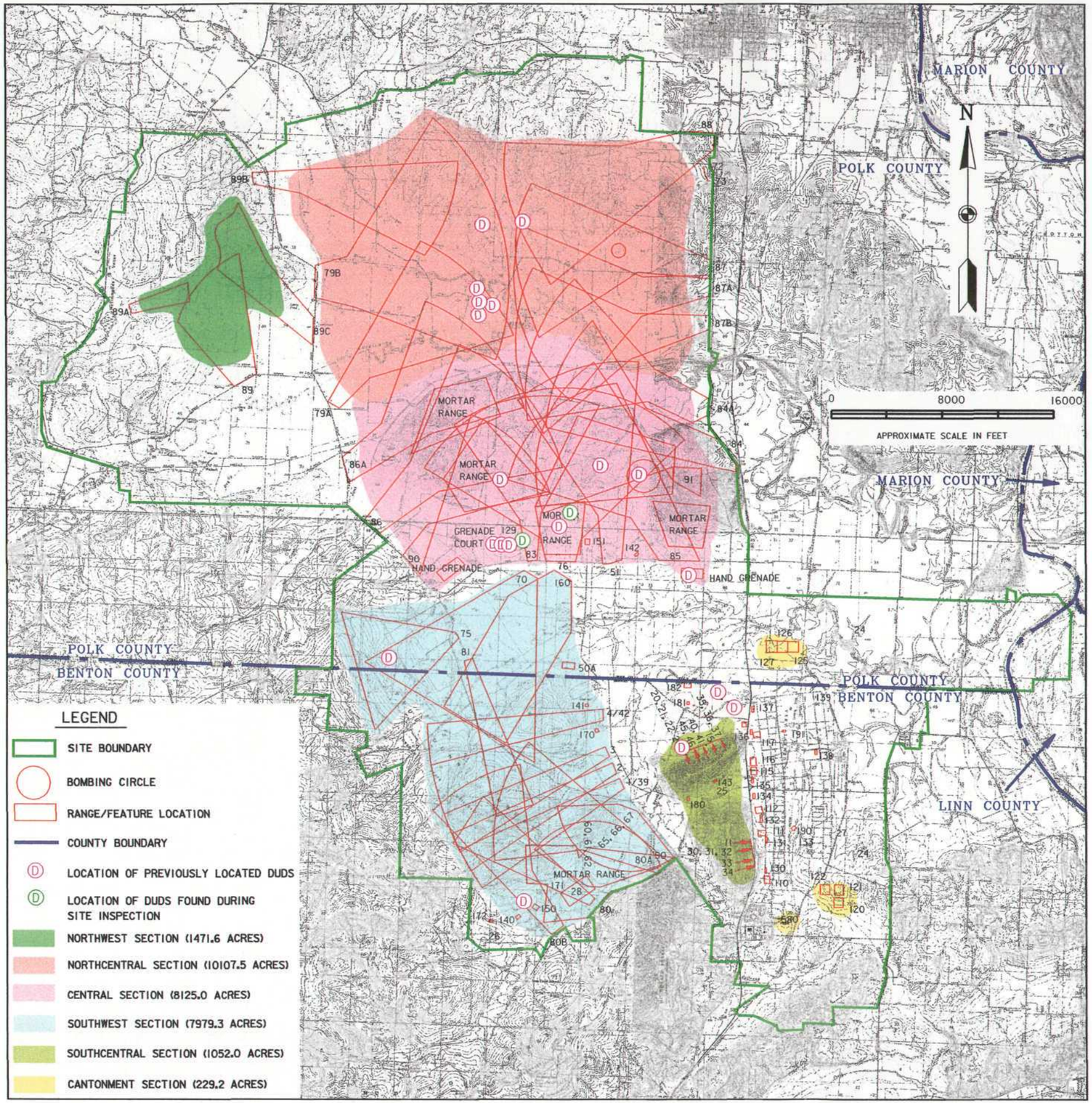

RANGE INDEX

1	KNOWN DISTANCE RIFLE RANGE
2	KNOWN DISTANCE RIFLE RANGE
3	KNOWN DISTANCE RIFLE RANGE
4	KNOWN DISTANCE RIFLE RANGE
11	1000' PISTOL RANGE
15	1000' PISTOL RANGE
20	1000' MACHINE GUN RANGE
21	1000' MACHINE GUN RANGE
22	1000' MACHINE GUN RANGE
23	1000' MACHINE GUN RANGE
24	PROPOSED GRENADE COURT
25	FLAME THROWER AREA
26	PROPOSED BAYONET ASSAULT COURSE
27	OBSTACLE COURSE
28	PROPOSED CLOSE COMBAT COURSE
30	1000' LANDSCAPE RANGE
31	1000' LANDSCAPE RANGE
32	1000' LANDSCAPE RANGE
33	1000' LANDSCAPE RANGE
34	1000' LANDSCAPE RANGE
35	1000' LANDSCAPE RANGE
36	1000' LANDSCAPE RANGE
37	1000' LANDSCAPE RANGE
39	1000' ANTI TANK RANGE
40	1000' ANTI TANK RANGE
41	1000' ANTI TANK RANGE
42	1000' ANTI TANK RANGE
45	1000' ANTI TANK RANGE
46	1000' ANTI TANK RANGE
50	THOMPSON SUB MACHINE GUN RANGE
50A	THOMPSON SUB MACHINE GUN RANGE
51	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
60	MINI ANTI AIRCRAFT RANGE
61	MINI ANTI AIRCRAFT RANGE
62	MINI ANTI AIRCRAFT RANGE
65	MINI ANTI AIR CRAFT RANGE
66	MINI ANTI AIRCRAFT RANGE
67	MINI ANTI AIRCRAFT RANGE
70	ANTI AIRCRAFT RANGE
71	ANTI AIRCRAFT RANGE (COULD NOT LOCATE)
72	PROPOSED MOVING TARGET RANGES
73	PROPOSED MOVING TARGET RANGES
75	FIELD COMBAT RANGE
76	FORTIFIED TRAINING AREA
79A	MOVING TARGET RANGE
79B	MOVING TARGET RANGE
80	FIELD COMBAT RANGE (PITS)
80A	FIELD COMBAT RANGE (PITS)
80B	FIELD COMBAT (PITS)
81	FIELD COMBAT RANGE (PITS)
83	FIELD COMBAT RANGE
84	FIELD COMBAT RANGE (PITS)
84A	FIELD COMBAT RANGE
85	FIELD COMBAT RANGE (PITS)
86	FIELD COMBAT RANGE (PITS)
86A	FIELD COMBAT RANGE (PITS)
87	FIELD COMBAT RANGE (PITS)
87A	FIELD COMBAT RANGE (PITS)
87B	FIELD COMBAT RANGE (PITS)
88	FIELD COMBAT RANGE (PITS)
89	FIELD COMBAT RANGE (PITS)
89A	FIELD COMBAT RANGE
89B	FIELD COMBAT RANGE
89C	FIELD COMBAT RANGE
89D	FIELD COMBAT RANGE (COULD NOT LOCATE)
90	MORTAR RANGE
91	MORTAR RANGE
110	BAYONET COURSE
111	BAYONET COURSE
112	BAYONET COURSE
113	BAYONET COURSE (COULD NOT LOCATE)
114	BAYONET COURSE (COULD NOT LOCATE)
115	BAYONET COURSE
116	BAYONET COURSE
117	BAYONET COURSE
120	PRACTICE GRENADE COURSE
121	PRACTICE GRENADE COURSE
122	PRACTICE GRENADE COURSE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
125	PRACTICE GRENADE COURSE
126	PRACTICE GRENADE COURSE
127	PRACTICE GRENADE COURSE
129	LIVE HAND GRENADE COURSE
130	OBSTACLE COURSE
131	OBSTACLE COURSE
132	OBSTACLE COURSE
133	OBSTACLE COURSE
134	OBSTACLE COURSE
135	OBSTACLE COURSE
136	OBSTACLE COURSE
137	OBSTACLE COURSE
138	OBSTACLE COURSE
139	OBSTACLE COURSE
140	OBSTACLE COURSE
141	INFILTRATION RANGE
142	INFILTRATION RANGE
143	INFILTRATION RANGE
150	NAZI VILLAGE
151	NAZI VILLAGE
160	TRANSITION COURSE
170	CLOSE COMBAT COURSE
171	CLOSE COMBAT COURSE
172	CLOSE COMBAT COURSE
180	GAS CHAMBER
181	GAS CHAMBER
182	GAS AREA
190	EMBARKING DEVICE
191	EMBARKING DEVICE
580	SKEET RANGE

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F100R002903
IMPACT AREAS

PROJ. DATE: SEPT 2001	DATE OF QUADS: 1974, 1984, & 1986	FIGURE 2-5
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3. RECOMMENDATIONS

3.1 SUMMARY OF RECOMMENDATIONS

A Risk Assessment Procedures for Ordnance and Explosives Sites Form, dated 25 November 1997 has been prepared for Camp Adair / Adair Air Force Station and is included in Appendix A of this report. Based on best available information, a Risk Assessment Code (**RAC**) score of **2** has been determined for this site.

RAC 2 indicates further action by CEHNC. This determination is concurred with.

In the determination of the hazard severity for Camp Adair, the effects of CWM at the site were assessed. Based on this assessment, it is recommended, in addition to further action regarding potential OE hazards, that CEHNC assess the potential for residual CWM hazards at Camp Adair.

3.2 OTHER ENVIRONMENTAL ACTIONS

The archive search did not identify any additional areas of potential environmental concern associated with the military use of Camp Adair / Adair Air Force Station.

3.3 PRELIMINARY ASSESSMENT ACTIONS

The archive search identified the use and storage of chemical warfare material at Camp Adair as an area that needs additional preliminary assessment action. The Inventory Project Report for Camp Adair did not address CWM.

APPENDIX A

RISK ASSESSMENT CODE PROCEDURE FORM

ETL 1110-1-165
25 NOVEMBER 1997
Previous Editions Obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE (OE) SITES

Site Name: Camp Adair / Adair Air Force Station Rater's Name: E.R. Valdez

Site Location: Polk, Benton, & Linn Co., OR Phone No.: 314-331-8206

DERP Project #: F10OR002903 Organization: CEMVS-ED-P

Date Completed: 13 September 2001 RAC Score: 2

OE RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The Risk Assessment Code (RAC) score will be used by the U.S. Army Engineering and Support Center, Huntsville (USAESCH), Ordnance and Explosives Team (USAESCH-OE) to prioritize the remedial action(s) at Formerly Used Defense Sites (FUDS). The risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OE hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability. Personnel involved in visits to potential OE sites should view the USAESCH-OE videotape entitled "A Life Threatening Encounter: OEW".

Part I. Hazard Severity - Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance.

TYPE OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition:	VALUE
Medium/Large Caliber (20 mm and larger)	**10**
Bombs, Explosive	**10**
Grenades, Hand and Rifle, Explosive	**10**
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	**10**
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	**6**
Bombs, Practice (w/spotting charges)	**6**
Grenades, Practice (w/spotting charges)	**4**
Landmines, Practice (w/spotting charges)	4
Small Arms, complete (.22 cal - .50 cal)	**1**
Small Arms, Expended	0
Practice ordnance (w/o spotting charges)	0

Conventional Ordnance and Ammunition (Select the largest single value) **10**

What evidence do you have regarding conventional UXO? *Historical documents indicated small arms, grenades, anti tank rockets, mortars, artillery, and aerial bombs were used on this site. It is estimated that over 265,000 medium/large caliber rounds were fired on over 28,000 acres of Camp Adair. The ASR site inspection located evidence of OE hazards in the form of dud 60mm and 81mm mortar rounds. Other documented accounts and recent interviews report of dud munitions (60mm, 81mm, 105mm, 155mm, and grenades). Interviews revealed past dud discoveries not reported to the proper authorities.*

B. Pyrotechnics (For munitions not described above.):

	VALUE
Munition (Containers) Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	**10**
Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	**6**
Flares, Signals, Simulators, screening smokes (other than WP)	**4**

Pyrotechnics (Select the largest single value) **10**

What evidence do you have regarding pyrotechnics? *The archive search uncovered evidence that this site used or stored white phosphorous, incendiaries, flares, and screening smoke.*

C. Bulk High Explosives (HE) (Not an integral part of conventional ordnance; uncontainerized.):

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	**10**
Demolition Charges	**10**
Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	**8**
Military Dynamite	**6**
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3

High Explosives (Select the largest single value) **10**

What evidence do you have regarding bulk explosives? *The archive search uncovered evidence that this site used or stored demolition charges, TNT, and blasting caps.*

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized):

	VALUE
Solid or Liquid Propellants	6

Propellants **0**

What evidence do you have regarding bulk propellants? *None. The archive search did not uncover evidence that this site used or stored these materials.*

E. Chemical Warfare Material (CWM) and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	**25**
War Gas Identification Sets	**20**
Radiological	15
Riot Control Agents (Vomiting, Tear)	**5**

Chemical and Radiological (Select the largest single value) 25

What evidence do you have of chemical/radiological *material*? *The ASR confirmed the use of tear gas, vesicant gas and the probable use of gas identification kits on site. Final disposition of the CWM could not be determined. No evidence was found to indicate on site burial, however USAESCH guidance indicates taking a conservative assessment.*

TOTAL HAZARD SEVERITY VALUE (Sum of Largest Values for A through E - Maximum of 61)	**55**

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1
HAZARD SEVERITY*

Description	Category	Hazard Severity Code
CATASTROPHIC	**I**	**21 and greater**
CRITICAL	II	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE	V	0

*Apply Hazard Severity Category to Table 3.
**If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.

Part II. Hazard Probability - The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used Department of Defense DOD site.

AREA, EXTENT, ACCESSIBILITY OF OE HAZARD
(Circle all values that apply)

A. Locations of OE Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or other confined locations	4
Inside walls, ceilings, or other Building/Structure	3
Subsurface	2

Location (Select the single largest value) 5

What evidence do you have regarding location of OE? *Duds were located on the surface of the farmlands. Other potential OE hazards exist in the form of dud munitions buried in the soil in the impact areas being unearthed and becoming exposed to the public. Area of potential OE contamination is extensive, estimated at 28,000 acres.*

B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building etc.)

	VALUE
Less than 1,250 feet	5
1,250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	0

Distance (Select the single largest value) 3

What are the nearest inhabited structures/buildings? *This site presents moderate risk to inhabited structures. A number of farm homes and buildings are built on the former impact areas. Some homes are actually located on the former mortar/artillery impact areas and less than a mile from where duds were found by the site inspection team. However, the total population in the former impact areas is sparse. A few homes are located directly on the former KD rifle ranges.*

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	**1**
0	0

Number of Buildings (Select the single largest value) **1**

Narrative: *A "few" homes/buildings, less than 5, exist in each section of the former impact areas or area where duds were found. However, the total number of homes potentially affected is over 26 if Camp Adair is addressed collectively.*

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	**5**
Industrial, Warehouse, etc	4
Agricultural, Forestry, etc.	**3**
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the largest single value) **5**

Describe types of buildings in the area. *The buildings in the area are primarily private residences, farm and dairy buildings, fish and wildlife offices, and logging facilities.*

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	**5**
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel which continuously monitors and controls entry; or an artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the area; and a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).	0

Accessibility (Select the single largest value) **5**

Describe the site accessibility. *Except for KD Rifle Range No. 4 that is surrounded by a chain link fence and gated, all areas of the former Camp Adair is accessible to the public. Well developed highways and numerous farm roads run throughout the site.*

F. Site Dynamics - This deals with site conditions subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	**0**

Site Dynamics (Select largest value) **0**

Describe the site dynamics. *The vast majority of the site is either farmlands or covered by mature trees and crops. New home construction is occurring at a very low pace. It appears unlikely that this pattern of use and growth will be appreciably changed in the foreseeable future. Although not factored into this assessment, the practice of plowing to only 8-10 inches may be changed to include plowing to 18 inches if different types of crops are planted. If employed, this new practice may unearth duds previously undisturbed.*

TOTAL HAZARD PROBABILITY VALUE (Sum of Largest Values for A through F - Maximum of 30)	**19**

Apply this value to Hazard Probability Table 2 to determine **Hazard Probability Level.**

TABLE 2
HAZARD PROBABILITY

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	**C**	**15 to 20**
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment - The risk assessment value for this site is determined using the following Table. Enter with the results of the Hazard Probability and Hazard Severity values.

TABLE 3
RISK ASSESSMENT

Probability Level	FREQUENT A	PROBABLE B	**OCCASIONAL** **C**	REMOTE D	IMPROBABLE E
Severity Level **CATASTROPHIC I**	1	1	**2**	3	4
CRITICAL II	1	2	3	4	5
MARGINAL III	2	3	4	5	5
NEGLIGIBLE IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1	Expedite INPR, recommending further action by USAESCH-Immediately call USAESCH-OE-S (commercial 256-895-1582/1598).
RAC 2	**High priority on completion of INPR - Recommend further action by USAESCH.**
RAC 3	Complete INPR - Recommend further action by USAESCH.
RAC 4	Complete INPR - Recommend further action by USAESCH.
RAC 5	Usually indicates that No DOD Action Indicated (NDAI) is necessary, submit NDAI and RAC to USAESCH.

==========

Part IV. Narrative - Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

The RAC score assigned to Camp Adair / Adair Air Force Station is 2.

Part I received a Hazard Severity Rating of "Catastrophic"; Part II received a Hazard Probability Rating of "Occasional". According to Table 3, these ratings convert to a Risk Assessment Code of 2.

In the determination of the RAC score for Camp Adair, CWM was considered. However, even if CWM were not considered the Total Hazard Severity Value would still have been 30 (Catastrophic) and the RAC score for Camp Adair would still have been a 2. The Hazard Probability Value would not have changed. The RAC score would still have been a 2.

The rater based the hazard severity on the large number (>265,000) of medium/large caliber munitions fired on the range. Applying a conservative 2% dud rate, approximately 5300 dud rounds could have occurred. The ASR site inspection team found direct evidence that some of these dud rounds still exist as OE hazards. A dud 60mm and seven 81mm mortar rounds were found in the central impact area by the team.

The archive search based the OE potential on the scenario that a number of dud medium/large caliber rounds (37mm-155mm) could remain buried throughout a large portion of the site. The OE potential also reflects the fact that a number of homes are built directly on the former impact areas where current duds were found.

The ASR team found no current readily identifiable CWM hazards atCamp Adair / Adair Air Force Station. However, the site inspection was visual only and limited to the surface of former CWM training areas. A determination of subsurface CWM contamination was not made.

APPENDIX B

ABBREVIATIONS, ACRONYMS AND BREVITY CODES

ABBREVIATIONS, ACRONYMS AND BREVITY CODES

The following list contains abbreviations, acronyms and brevity codes within this ASR, as well as typical others.

AAF*	Army Air Field
AA	Anti-Aircraft
ACGIH	American Conference of Governmental Industrial Hygienist
AEC	Army Environmental Center
AFB	Air Force Base
ACGIH	American Conference of Governmental Industrial Hygienist
ANSI	American National Standards Institute
AP	Armor Piercing
APDS	Armor Piercing Discarding Sabot
APERS	Anti-Personnel
AP-T	Armor Piercing-Tracer
ASR	Archive Search Report
AT	Anti-Tank
BD	Base Detonating
BD/DR	Building Demolition/Debris Removal
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CADD	Computer-Aided Drafting and Design
CAIS	Chemical Agent Identification Set
cal	Caliber
CBDCOM	Chemical and Biological Defense Command
CE	Corps of Engineers
CEHNC	Corps of Engineers, Huntsville Engineering and Support Center
CEMVS	Corps of Engineers, Mississippi Valley-St. Louis District
CEMVK	Corps of Engineers, Mississippi Valley-Vicksburg District
CEP	Circular Error of Probability
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
COE	Chief of Engineers
ctg	Cartridge
CWM	Chemical Warfare Material
CWS*	Chemical Warfare Service
CX	Center of Expertise
DA	Department of the Army
DEET	Diethyltoluamide
DERP	Defense Environmental Restoration Program

DOD	Department of Defense
DOI	Department of Interior
EE/CA	Engineering Evaluation/Cost Analysis
EIS	Environmental Impact Statement
EM	Engineer Manual
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ETL	Engineering Technical Letter
FGDC	Federal Geographic Data Committee
FM	Field Manual
FS	Feasibility Study
FUDS	Formerly Used Defense Sites
GIS	Geographic Information System
GPM	Gallons Per Minute
GPS	Global Positioning System
GSA	General Services Administration
HAZWOPER	Hazardous Waste Operations
HBX	high blast explosives; mixtures of RDX, TNT and aluminum
HE	High Explosive
HEAT	High Explosive Anti-Tank
HEI	High Explosive Incendiary
HEP	High Explosive Plastic
HMX	cyclotetramethylenetetranitramine (a type of high explosive)
HTRW	Hazardous Toxic and Radioactive Waste
HTW	Hazardous and Toxic Waste
IAS	Initial Assessment Study
IATCB	Interdepartmental Air Traffic Control Board
INPR	Inventory Project Report
IRP	Installation Restoration Program
LD	Lyme Disease
MCX	Mandatory Center of Expertise
MT	Mechanical Time
MTSQ	Mechanical Time Super Quick
NARA	National Archives and Records Administration
NAVSEA	Naval Sea Systems Command
NAS*	Naval Air Station
NCP	National Contingency Plan
n.d.	No Date
NEW	Net Explosive Weight
NGVD	National Geographic Vertical Datum
NIMA	National Imagery and Mapping Agency

NIOSH	National Institute for Safety and Health
NMAS	National Map Accuracy Standards
NPL	National Priorities List
NOAA	National Oceanic and Atmospheric Administration
NOFA	No Further Action
NPRC	National Personnel Records Center
NRC	National Records Center
NWS	National Weather Service
OCE	Office Chief of Engineers
OE	Ordnance and Explosives
OP	Ordnance Pamphlet
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PD	Point Detonating
PE	Professional Engineer
PETN	pentaerythritol tetranitrate (a type of high explosive)
PIBD	Point Initiating, Base Detonating
PM	Project Manager
PPE	Personal Protective Equipment
QASAS	Quality Assurance Specialist, Ammunition Surveillance
RAC	Risk Assessment Code
RDX	cyclotrimethylenetrinitramine; also known as cyclonite or hexogen (a type of high explosive)
RG	Record Group
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SARA	Superfund Amendments and Reauthorization Act
SEP	Spherical Error of Probability
SOP	Standing Operating Procedures
SPB*	Surplus Property Board
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
TCRA	Time Critical Removal Action
TEU	United States Army Technical Escort Unit
TM	Technical Manual
TNT	Trinitrotoluene
TP	Target Practice
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAFHRA	U.S. Air Force Historical Research Agency
USATCES	U.S. Army Technical Center for Explosive Safety
USATHMA	U.S. Army Toxic and Hazardous Materials Agency

USC	United States Code
USCG	Untied States Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WAA*	War Assets Administration
WAGE	Wide Area GPS Enhancemen
WGS	World Geodetic System
WNRC	Washington National Records Center

* designates an historic acronym

APPENDIX C

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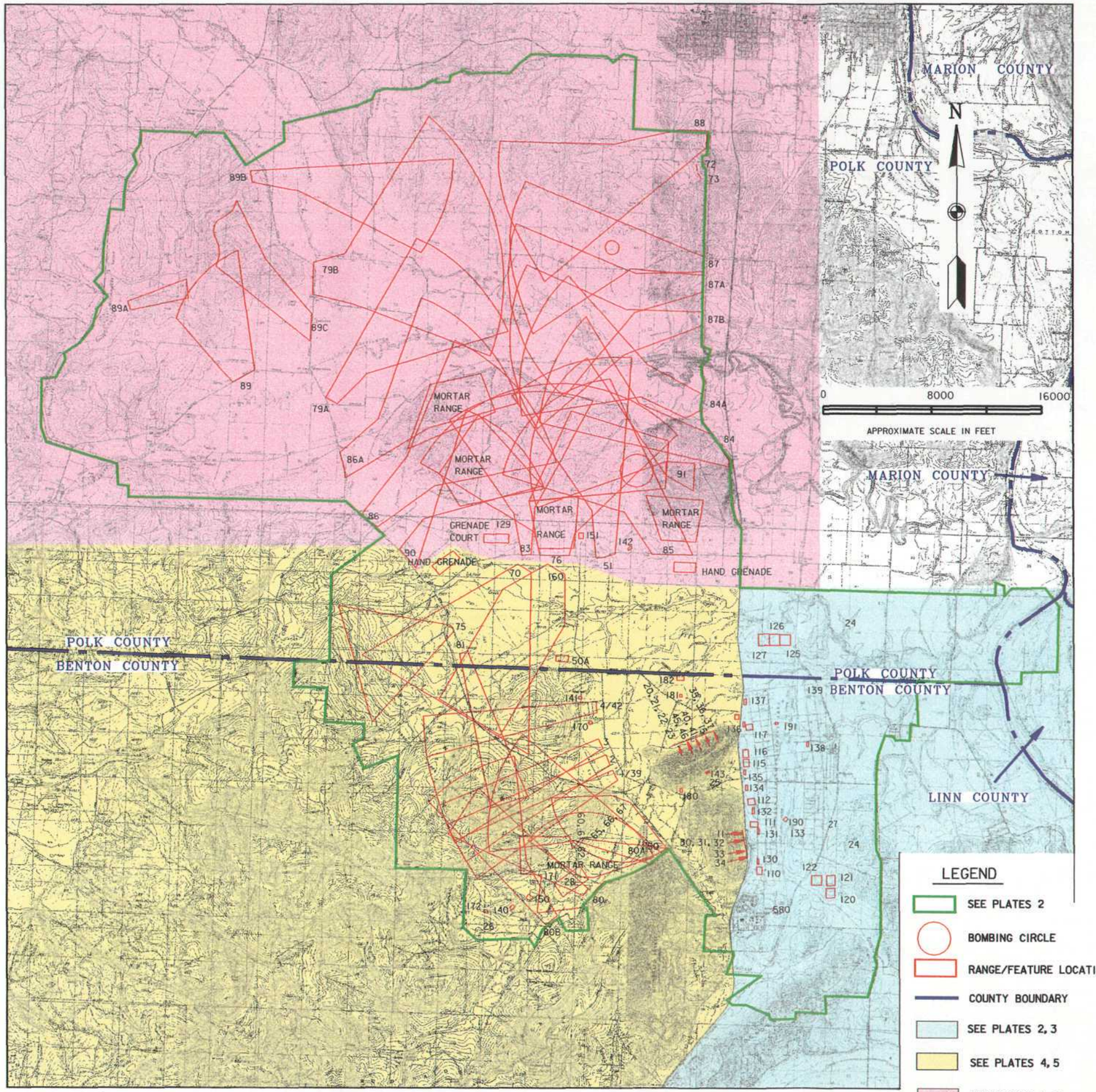
PLATES

REPORT FIGURES AND PLATES



RANGE INDEX

1	KNOWN DISTANCE RIFLE RANGE	86A	FIELD COMBAT RANGE (PITS)
2	KNOWN DISTANCE RIFLE RANGE	87	FIELD COMBAT RANGE (PITS)
3	KNOWN DISTANCE RIFLE RANGE	87A	FIELD COMBAT RANGE (PITS)
4	KNOWN DISTANCE RIFLE RANGE	87B	FIELD COMBAT RANGE (PITS)
11	1000' PISTOL RANGE	88	FIELD COMBAT RANGE (PITS)
15	1000' PISTOL RANGE	89	FIELD COMBAT RANGE (PITS)
20	1000' MACHINE GUN RANGE	89A	FIELD COMBAT RANGE
21	1000' MACHINE GUN RANGE	89B	FIELD COMBAT RANGE
22	1000' MACHINE GUN RANGE	89C	FIELD COMBAT RANGE
23	1000' MACHINE GUN RANGE	89D	FIELD COMBAT RANGE (COULD NOT LOCATE)
24	PROPOSED GRENADE COURT	90	MORTAR RANGE
25	FLAME THROWER AREA	91	MORTAR RANGE
26	PROPOSED BAYONET ASSAULT COURSE	110	BAYONET COURSE
27	OBSTACLE COURSE	111	BAYONET COURSE
28	PROPOSED CLOSE COMBAT COURSE	112	BAYONET COURSE
30	1000' LANDSCAPE RANGE	113	BAYONET COURSE (COULD NOT LOCATE)
31	1000' LANDSCAPE RANGE	114	BAYONET COURSE (COULD NOT LOCATE)
32	1000' LANDSCAPE RANGE	115	BAYONET COURSE
33	1000' LANDSCAPE RANGE	116	BAYONET COURSE
34	1000' LANDSCAPE RANGE	117	BAYONET COURSE
35	1000' LANDSCAPE RANGE	120	PRACTICE GRENADE COURSE
36	1000' LANDSCAPE RANGE	121	PRACTICE GRENADE COURSE
37	1000' LANDSCAPE RANGE	122	PRACTICE GRENADE COURSE
39	1000' ANTI TANK RANGE	123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
40	1000' ANTI TANK RANGE	124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
41	1000' ANTI TANK RANGE	125	PRACTICE GRENADE COURSE
42	1000' ANTI TANK RANGE	126	PRACTICE GRENADE COURSE
45	1000' ANTI TANK RANGE	127	PRACTICE GRENADE COURSE
46	1000' ANTI TANK RANGE	129	LIVE HAND GRENADE COURSE
50	THOMPSON SUB MACHINE GUN RANGE	130	OBSTACLE COURSE
50A	THOMPSON SUB MACHINE GUN RANGE	131	OBSTACLE COURSE
51	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)	132	OBSTACLE COURSE
60	MINI ANTI AIRCRAFT RANGE	133	OBSTACLE COURSE
61	MINI ANTI AIRCRAFT RANGE	134	OBSTACLE COURSE
62	MINI ANTI AIRCRAFT RANGE	135	OBSTACLE COURSE
65	MINI ANTI AIR CRAFT RANGE	136	OBSTACLE COURSE
66	MINI ANTI AIRCRAFT RANGE	137	OBSTACLE COURSE
67	MINI ANTI AIRCRAFT RANGE	138	OBSTACLE COURSE
70	ANTI AIRCRAFT RANGE	139	OBSTACLE COURSE
71	ANTI AIRCRAFT RANGE (COULD NOT LOCATE)	140	OBSTACLE COURSE
72	PROPOSED MOVING TARGET RANGES	141	INFILTRATION RANGE
73	PROPOSED MOVING TARGET RANGES	142	INFILTRATION RANGE
75	FIELD COMBAT RANGE	143	INFILTRATION RANGE
76	FORTIFIED TRAINING AREA	150	NAZI VILLAGE
79A	MOVING TARGET RANGE	151	NAZI VILLAGE
79B	MOVING TARGET RANGE	160	TRANSITION COURSE
80	FIELD COMBAT RANGE (PITS)	170	CLOSE COMBAT COURSE
80A	FIELD COMBAT RANGE (PITS)	171	CLOSE COMBAT COURSE
80B	FIELD COMBAT (PITS)	172	CLOSE COMBAT COURSE
81	FIELD COMBAT RANGE (PITS)	180	GAS CHAMBER
83	FIELD COMBAT RANGE	181	GAS CHAMBER
84	FIELD COMBAT RANGE (PITS)	182	GAS AREA
84A	FIELD COMBAT RANGE	190	EMBARKING DEVICE
85	FIELD COMBAT RANGE (PITS)	191	EMBARKING DEVICE
86	FIELD COMBAT RANGE (PITS)	580	SKEET RANGE

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
AERIAL PHOTO PLATE LOCATIONS

PROJ. DATE: SEPT 2001	DATE OF QUADS: 1974, 1984, & 1986	PLATE NO.
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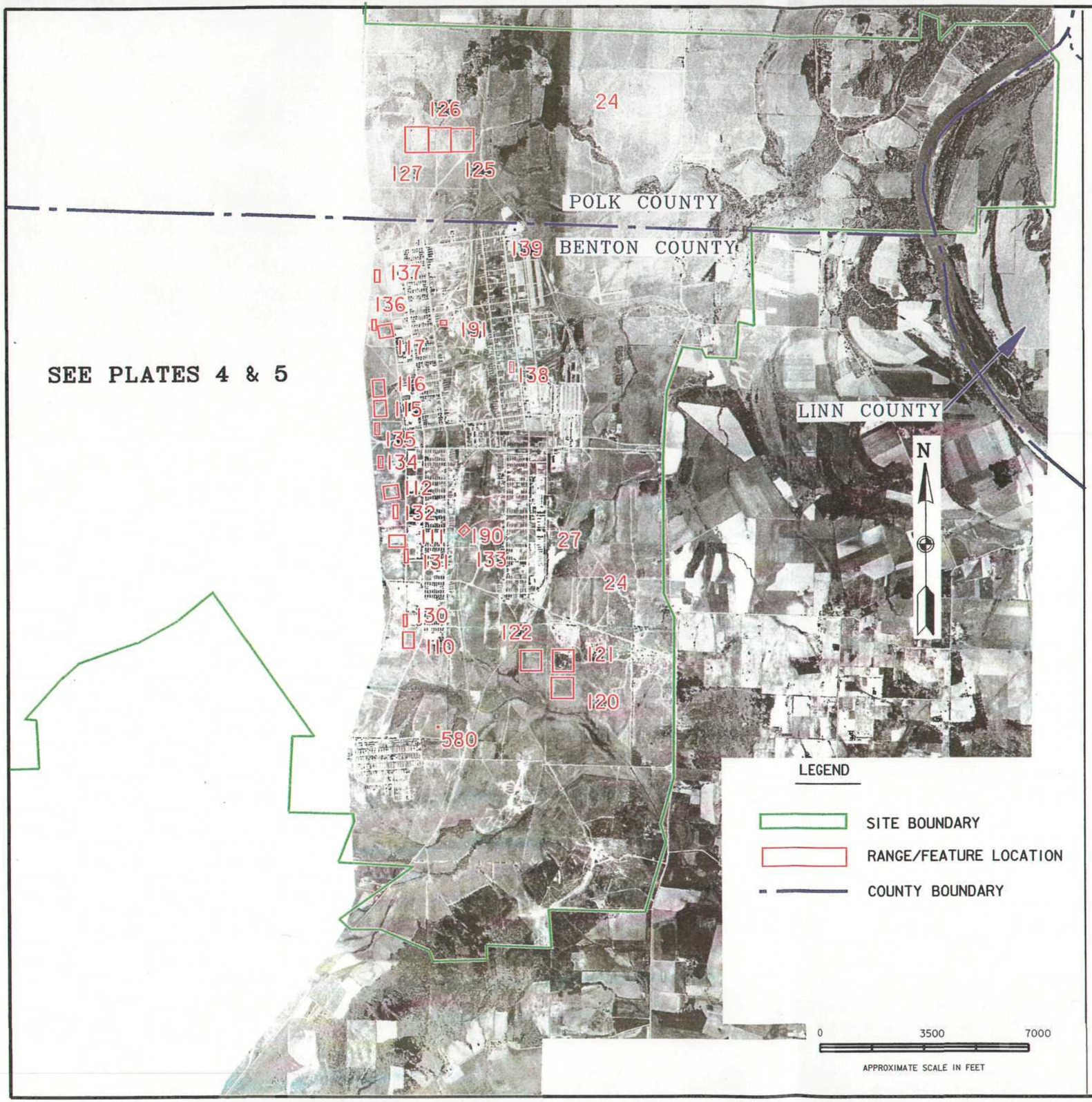

RANGE INDEX

24	PROPOSED GRENADE COURT
27	OBSTACLE COUSE
110	BAYONET COURSE
111	BAYONET COURSE
112	BAYONET COURSE
113	BAYONET COURSE (COULD NOT LOCATE)
114	BAYONET COURSE (COULD NOT LOCATE)
115	BAYONET COURSE
116	BAYONET COURSE
117	BAYONET COURSE
120	PRACTICE GRENADE COURSE
121	PRACTICE GRENADE COURSE
122	PRACTICE GRENADE COURSE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
125	PRACTICE GRENADE COURSE
126	PRACTICE GRENADE COURSE
127	PRACTICE GRENADE COURSE
130	OBSTACLE COURSE
131	OBSTACLE COURSE
132	OBSTACLE COURSE
133	OBSTACLE COURSE
134	OBSTACLE COURSE
135	OBSTACLE COURSE
136	OBSTACLE COURSE
137	OBSTACLE COURSE
138	OBSTACLE COURSE
139	OBSTACLE COURSE
190	EMBARKING DEVICE
191	EMBARKING DEVICE
580	SKEET RANGE

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
1944 AERIAL PHOTO (SOUTHEASTERN SECTION)

PROJ. DATE: SEPT 2001	DATE OF PHOTO: 1944	PLATE NO. 2
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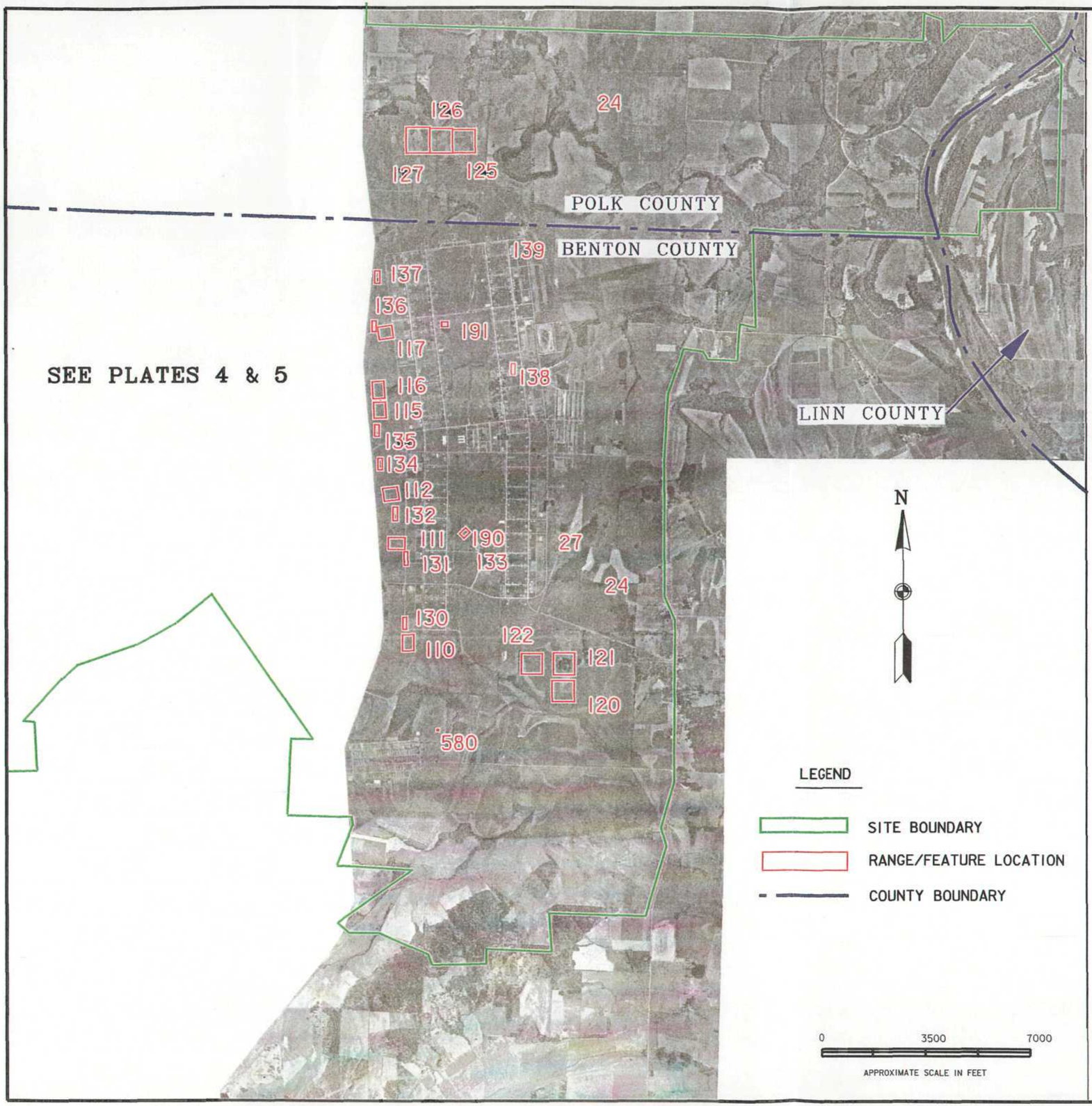

SEE PLATES 4 & 5

LEGEND

SITE BOUNDARY

RANGE/FEATURE LOCATION

COUNTY BOUNDARY

0 3500 7000

APPROXIMATE SCALE IN FEET

RANGE INDEX

24	PROPOSED GRENADE COURT
27	OBSTACLE COUSE
110	BAYONET COURSE
111	BAYONET COURSE
112	BAYONET COURSE
113	BAYONET COURSE (COULD NOT LOCATE)
114	BAYONET COURSE (COULD NOT LOCATE)
115	BAYONET COURSE
116	BAYONET COURSE
117	BAYONET COURSE
120	PRACTICE GRENADE COURSE
121	PRACTICE GRENADE COURSE
122	PRACTICE GRENADE COURSE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
125	PRACTICE GRENADE COURSE
126	PRACTICE GRENADE COURSE
127	PRACTICE GRENADE COURSE
130	OBSTACLE COURSE
131	OBSTACLE COURSE
132	OBSTACLE COURSE
133	OBSTACLE COURSE
134	OBSTACLE COURSE
135	OBSTACLE COURSE
136	OBSTACLE COURSE
137	OBSTACLE COURSE
138	OBSTACLE COURSE
139	OBSTACLE COURSE
190	EMBARKING DEVICE
191	EMBARKING DEVICE
580	SKEET RANGE

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F100R002903
1948 AERIAL PHOTO (SOUTHEASTERN SECTION)

PROJ. DATE: SEPT 2001	DATE OF PHOTO: 1948	PLATE NO.
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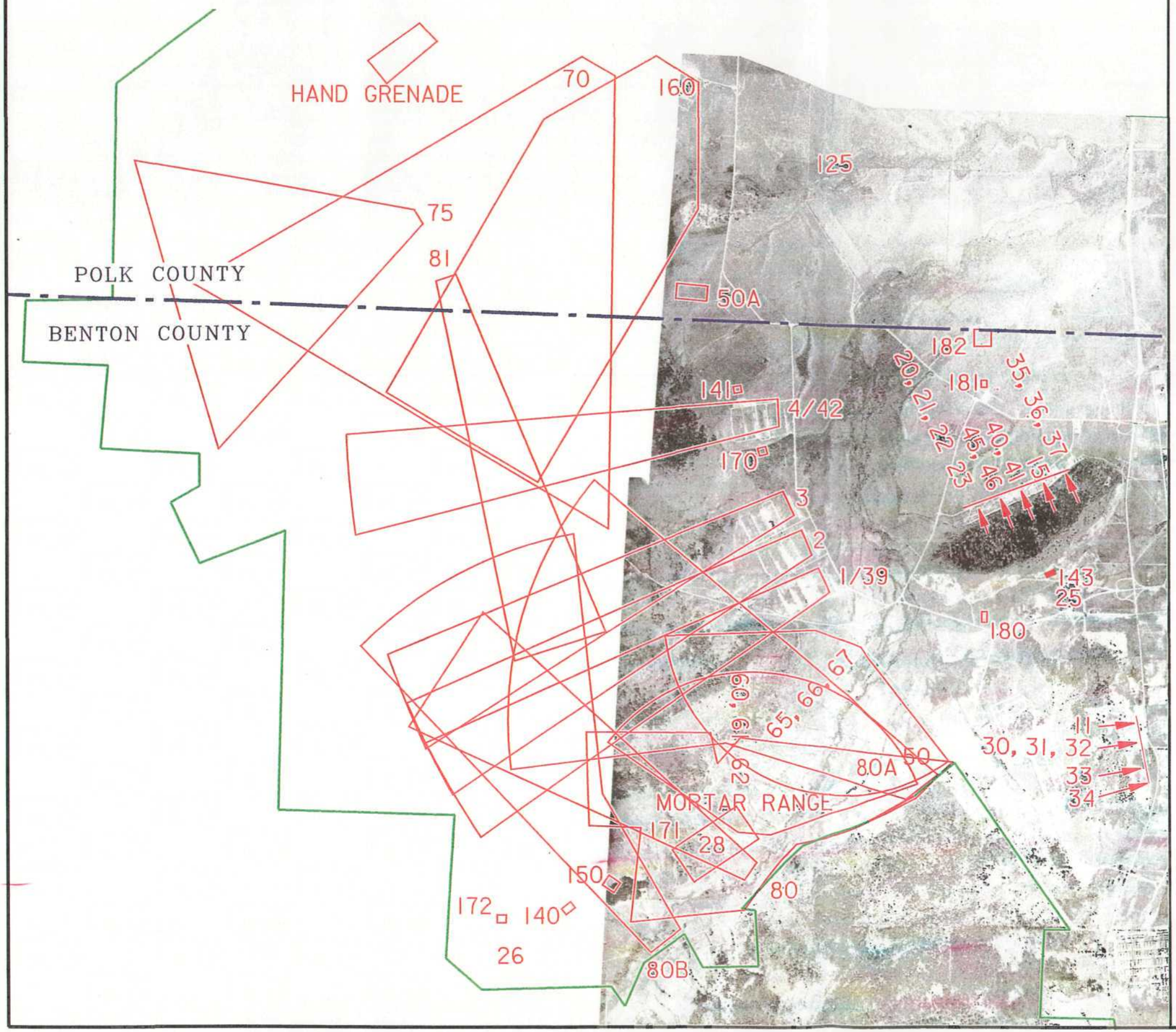
SEE PLATES 6 & 7



RANGE INDEX

1	KNOWN DISTANCE RIFLE RANGE	50	THOMPSON SUB MACHINE GUN RANGE
2	KNOWN DISTANCE RIFLE RANGE	50A	THOMPSON SUB MACHINE GUN RANGE
3	KNOWN DISTANCE RIFLE RANGE	60	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
4	KNOWN DISTANCE RIFLE RANGE	61	MINI ANTI AIRCRAFT RANGE
11	1000' PISTOL RANGE	62	MINI ANTI AIRCRAFT RANGE
15	1000' PISTOL RANGE	65	MINI ANTI AIRCRAFT RANGE
20	1000' MACHINE GUN RANGE	66	MINI ANTI AIR CRAFT RANGE
21	1000' MACHINE GUN RANGE	67	MINI ANTI AIRCRAFT RANGE
22	1000' MACHINE GUN RANGE	70	MINI ANTI AIRCRAFT RANGE
23	1000' MACHINE GUN RANGE	71	ANTI AIRCRAFT RANGE (COULD NOT LOCATE)
24	PROPOSED GRENADE COURT	75	ANTI AIRCRAFT RANGE
25	FLAME THROWER AREA	80	FIELD COMBAT RANGE
26	PROPOSED BAYONET ASSAULT COURSE	80A	FIELD COMBAT RANGE (PITS)
27	OBSTACLE COURSE	80B	FIELD COMBAT RANGE (PITS)
28	PROPOSED CLOSE COMBAT COURSE	81	FIELD COMBAT RANGE (PITS)
30	1000' LANDSCAPE RANGE	90	FIELD COMBAT RANGE (PITS)
31	1000' LANDSCAPE RANGE	140	MORTAR RANGE
32	1000' LANDSCAPE RANGE	141	OBSTACLE COURSE
33	1000' LANDSCAPE RANGE	143	INFILTRATION COURSE
34	1000' LANDSCAPE RANGE	150	NAZI VILLAGE
35	1000' LANDSCAPE RANGE	160	TR4ANSITION COURSE
36	1000' LANDSCAPE RANGE	170	CLOSE COMBAT COURSE
37	1000' LANDSCAPE RANGE	171	CLOSE COMBAT COURSE
39	1000' ANTI TANK RANGE	172	CLOSE COMBAT COURSE
40	1000' ANTI TANK RANGE	180	GAS CHAMBER
41	1000' ANTI TANK RANGE	181	GAS CHAMBER
42	1000' ANTI TANK RANGE	182	GAS CHAMBER AREA
45	1000' ANTI TANK RANGE		
46	1000' ANTI TANK RANGE		

NOTE: PHOTO COVERAGE WAS NOT AVAILABLE FOR THE ENTIRE SITE. RANGE NAMES ARE BASED ON HISTORICAL MAPS.

LEGEND

SITE LOCATION

RANGE/FEATURE LOCATION

COUNTY BOUNDARY

0 3200 6400

APPROXIMATE SCALE IN FEET

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F100R002903
1944 AERIAL PHOTO (SOUTHWESTERN SECTION)

PROJ. DATE: SEPT 2001	DATE OF PHOTO: 1944	PLATE NO.
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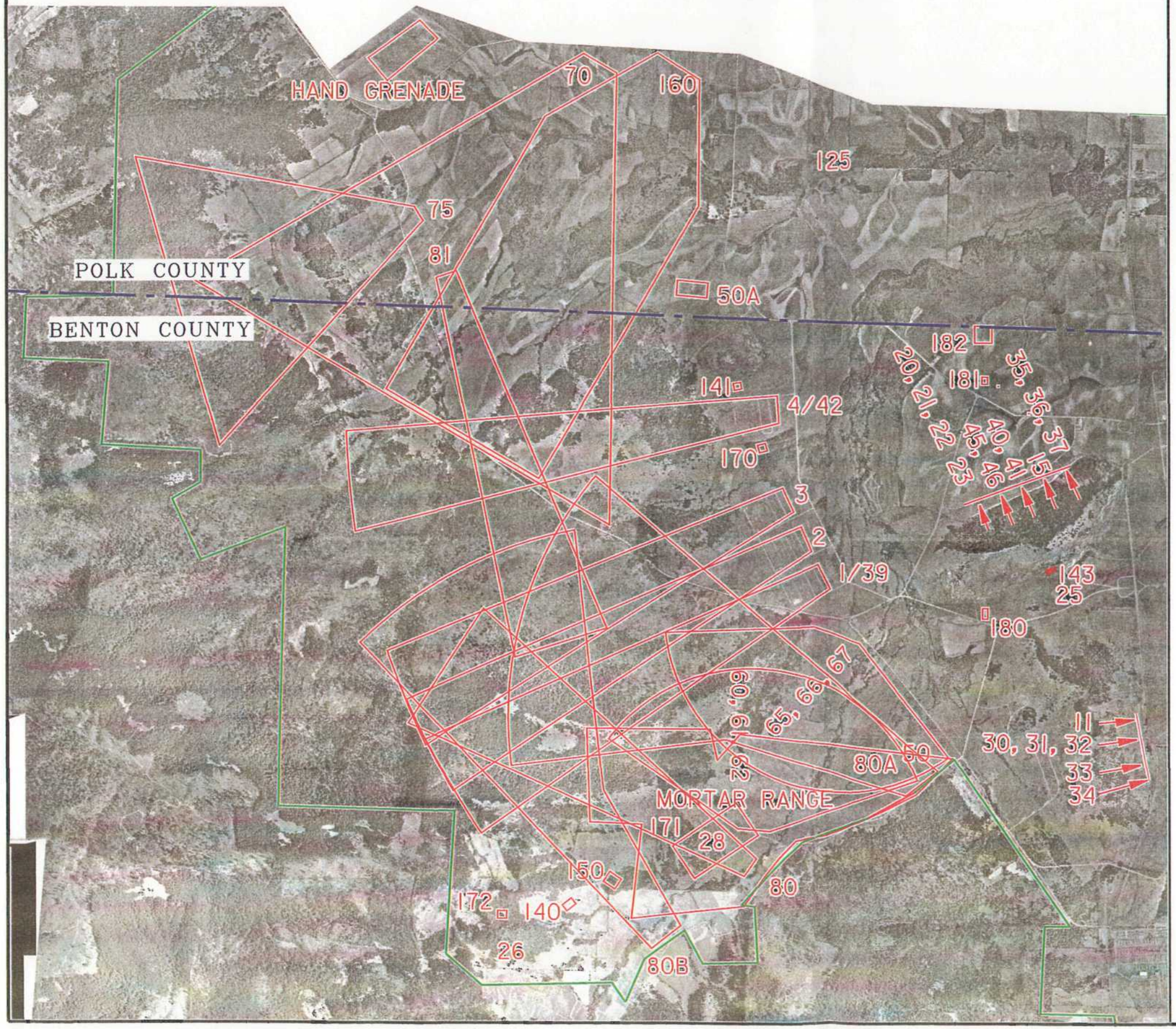
SEE PLATES 6 & 7



RANGE INDEX

1	KNOWN DISTANCE RIFLE RANGE
2	KNOWN DISTANCE RIFLE RANGE
3	KNOWN DISTANCE RIFLE RANGE
4	KNOWN DISTANCE RIFLE RANGE
11	1000' PISTOL RANGE
15	1000' PISTOL RANGE
20	1000' MACHINE GUN RANGE
21	1000' MACHINE GUN RANGE
22	1000' MACHINE GUN RANGE
23	1000' MACHINE GUN RANGE
24	PROPOSED GRENADE COURT
25	FLAME THROWER AREA
26	PROPOSED BAYONET ASSAULT COURSE
27	OBSTACLE COURSE
28	PROPOSED CLOSE COMBAT COURSE
30	1000' LANDSCAPE RANGE
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32	1000' LANDSCAPE RANGE
33	1000' LANDSCAPE RANGE
34	1000' LANDSCAPE RANGE
35	1000' LANDSCAPE RANGE
36	1000' LANDSCAPE RANGE
37	1000' LANDSCAPE RANGE
39	1000' ANTI TANK RANGE
40	1000' ANTI TANK RANGE
41	1000' ANTI TANK RANGE
42	1000' ANTI TANK RANGE
45	1000' ANTI TANK RANGE
46	1000' ANTI TANK RANGE
50	THOMPSON SUB MACHINE GUN RANGE
50A	THOMPSON SUB MACHINE GUN RANGE
60	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
61	MINI ANTI AIRCRAFT RANGE
62	MINI ANTI AIRCRAFT RANGE
65	MINI ANTI AIRCRAFT RANGE
66	MINI ANTI AIR CRAFT RANGE
67	MINI ANTI AIRCRAFT RANGE
70	MINI ANTI AIRCRAFT RANGE
71	ANTI AIRCRAFT RANGE (COULD NOT LOCATE)
75	ANTI AIRCRAFT RANGE
80	FIELD COMBAT RANGE
80A	FIELD COMBAT RANGE (PITS)
80B	FIELD COMBAT RANGE (PITS)
81	FIELD COMBAT RANGE (PITS)
90	FIELD COMBAT RANGE (PITS)
140	MORTAR RANGE
141	OBSTACLE COURSE
143	INFILTRATION COURSE
150	NAZI VILLAGE
160	TR4ANSITION COURSE
170	CLOSE COMBAT COURSE
171	CLOSE COMBAT COURSE
172	CLOSE COMBAT COURSE
180	GAS CHAMBER
181	GAS CHAMBER
182	GAS CHAMBER AREA

LEGEND

- SITE LOCATION
- RANGE/FEATURE LOCATION
- COUNTY BOUNDARY

0 3200 6400

APPROXIMATE SCALE IN FEET

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
1948 AERIAL PHOTO (SOUTHWESTERN SECTION)

PROJ. DATE: SEPT 2001	DATE OF PHOTO: 1948	PLATE NO. 5
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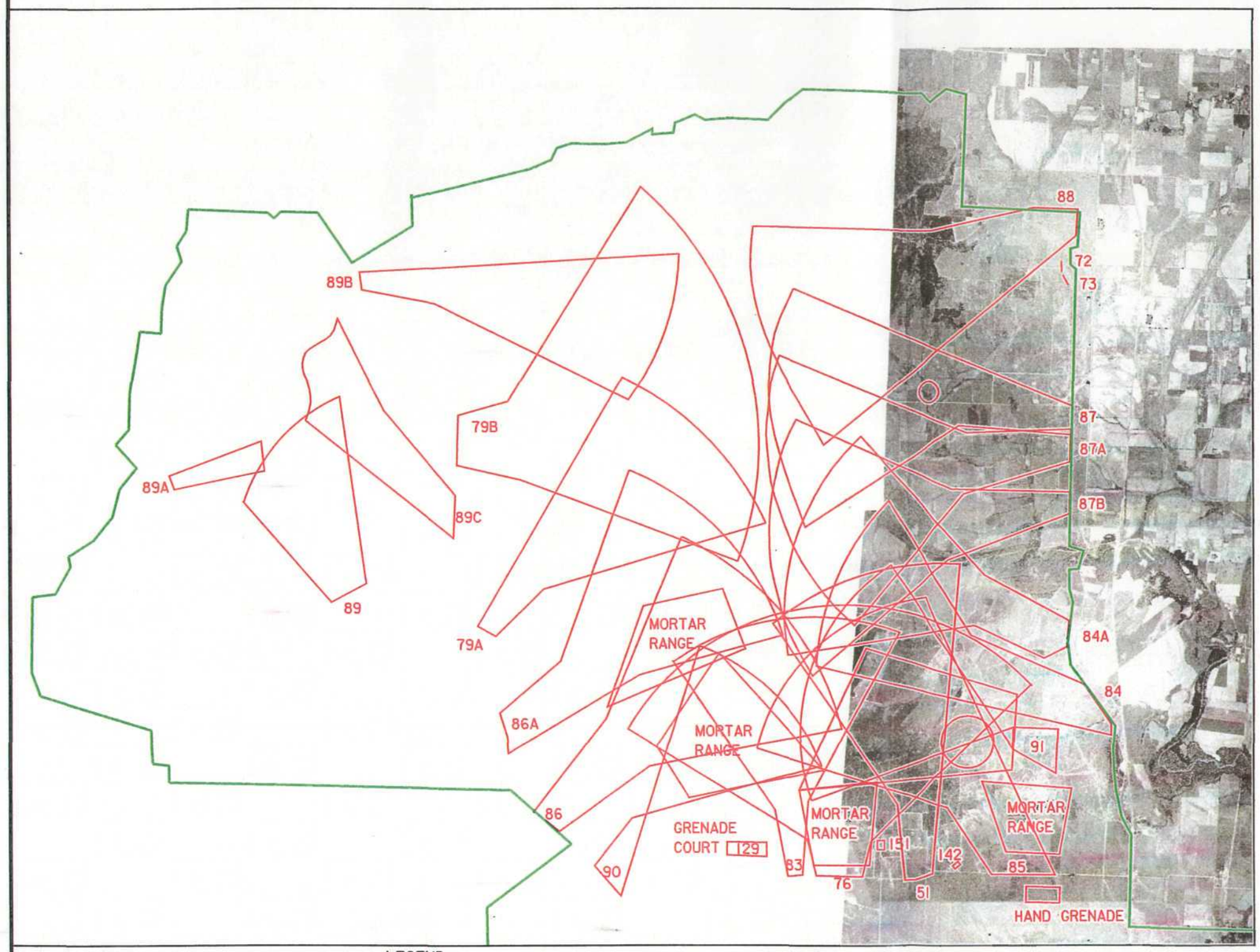

RANGE INDEX

51	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
72	PROPOSED MOVING TARGET RANGES
73	PROPOSED MOVING TARGET RANGES
76	FORTIFIED TRAINING AREA
79A	MOVING TARGET RANGE
79B	MOVING TARGET RANGE
83	FIELD COMBAT RANGE
84	FIELD COMBAT RANGE (PITS)
84A	FIELD COMBAT RANGE
85	FIELD COMBAT RANGE (PITS)
86	FIELD COMBAT RANGE (PITS)
86A	FIELD COMBAT RANGE (PITS)
87	FIELD COMBAT RANGE (PITS)
87A	FIELD COMBAT RANGE (PITS)
87B	FIELD COMBAT RANGE (PITS)
88	FIELD COMBAT RANGE (PITS)
89	FIELD COMBAT RANGE (PITS)
89A	FIELD COMBAT RANGE
89B	FIELD COMBAT RANGE
89C	FIELD COMBAT RANGE
89D	FIELD COMBAT RANGE (COULD NOT LOCATE)
90	MORTAR RANGE
91	MORTAR RANGE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
129	LIVE HAND GRENADE COURSE
142	INFILTRATION RANGE
151	NAZI VILLAGE

NOTE: PHOTO COVERAGE WAS NOT AVAILABLE FOR THE ENTIRE SITE. RANGE NAMES ARE BASED ON HISTORICAL MAPS.

LEGEND

- SITE BOUNDARY
- BOMBING CIRCLE
- RANGE/FEATURE LOCATION

0 5500 11000

APPROXIMATE SCALE IN FEET

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
1944 AERIAL PHOTO (NORTHERN SECTION)

PROJ. DATE: SEPT 2001	DATE OF PHOTO: 1944	PLATE NO. 6
24-SEP-2001 15:03	t:\oew\oew2001\oregon\campadair\plate644photo.dgn	

RANGE INDEX

51	FIELD COMBAT RANGE (THOMPSON SUB MACHINE GUN)
72	PROPOSED MOVING TARGET RANGES
73	PROPOSED MOVING TARGET RANGES
76	FORTIFIED TRAINING AREA
79A	MOVING TARGET RANGE
79B	MOVING TARGET RANGE
83	FIELD COMBAT RANGE
84	FIELD COMBAT RANGE (PITS)
84A	FIELD COMBAT RANGE
85	FIELD COMBAT RANGE (PITS)
86	FIELD COMBAT RANGE (PITS)
86A	FIELD COMBAT RANGE (PITS)
87	FIELD COMBAT RANGE (PITS)
87A	FIELD COMBAT RANGE (PITS)
87B	FIELD COMBAT RANGE (PITS)
88	FIELD COMBAT RANGE (PITS)
89	FIELD COMBAT RANGE (PITS)
89A	FIELD COMBAT RANGE
89B	FIELD COMBAT RANGE
89C	FIELD COMBAT RANGE
89D	FIELD COMBAT RANGE (COULD NOT LOCATE)
90	MORTAR RANGE
91	MORTAR RANGE
123	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
124	PRACTICE GRENADE COURSE (COULD NOT LOCATE)
129	LIVE HAND GRENADE COURSE
142	INFILTRATION RANGE
151	NAZI VILLAGE

LEGEND

- SITE BOUNDARY
- BOMBING CIRCLE
- RANGE/FEATURE LOCATION

0 5500 11000

APPROXIMATE SCALE IN FEET

N

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

CAMP ADAIR / ADAIR AIR FORCE STATION
CORVALLIS, OREGON
POLK, BENTON, AND LINN COUNTIES
DERP-FUDS* F10OR002903
1948 AERIAL PHOTO (NORTHERN SECTION)

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